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A PRESENT-DAY REVIEW OF GASTRIC AND DUODENAL ULCER

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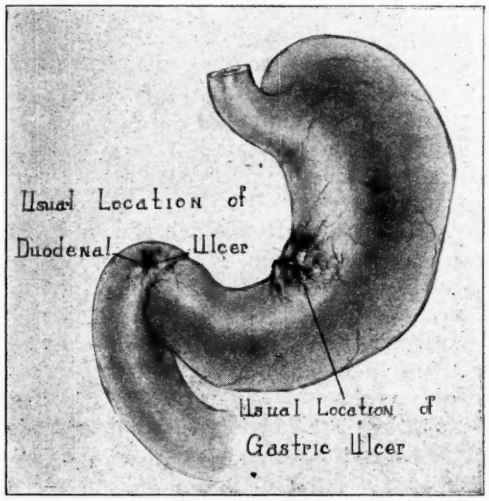
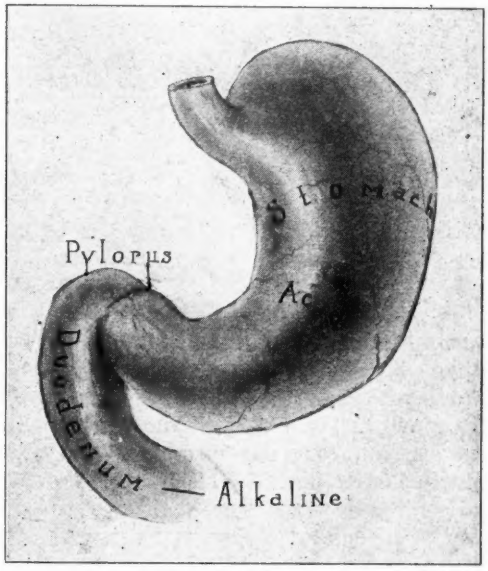
THE attempt to discuss this extensive and important matter in a short space of time is indeed an impossibly ambitious undertaking, and, as I realize the futility of trying to cover the subject, even partially, it is my purpose to bring up for brief discussion the more important aspects of this disease, with reference to those



advances which have been recorded in the current medical literature. There is more and more unanimity of thought among various investigators, but at the same time divergent opinions are encountered, particularly in regard to the relation of gastric ulcer to gastric cancer, in regard to indications for operation, and the choice of various types of operation. Except in speaking of etiology and pathology, and in quoting some authors, I shall make strict distinction between gastric and duodenal ulcer, as it is, in my opinion, a mistake to refer to them together, especially when we consider the question of treatment.

The problem of the causation of peptic ulcer seems as far from solution as ever, though intriguing facts are constantly being brought to light. Let me recall to your attention that gastric ulcers occur on the lesser curvature, usually near the pylorus, benign ulcer never occurs on the greater curvature[2], and duodenal ulcer is usually within an inch of the pylorus, where the duodenal mucous membrane first comes into contact with the acid chyme expelled from the stomach. The more we study the etiology, the more we are impressed with the fact that disturbances in the relaxation of the pyloric sphincter (achalasia) probably have a great causative effect, in that such disturbances prevent the normal regurgitation of alkaline duodenal contents into the stomach to neutralize the irritating acid of that organ. This difficulty has been



treated by some surgeons by attempting to sever the nerves which cause contraction of the pyloric musculature. The possibility of peptic ulcer being, at least in part, dependent on, or resulting from, an infection elsewhere in the body, is being continually studied, and the finding of the same strains of streptococci in ulcers, as in distant foci, is an observation of enough scientific accuracy and constancy to demand consideration[5]. The modern treatment of ulcer includes the removal of all such possible foci. The familial tendency to peptic ulcer is constantly noted, as well as the so-called "ulcer diathesis", or, one might say, individual susceptibility.

A recent report by Schutz[9] regarding the etiology, presents a study of 30 postmortem specimens, and he states that the lesion may be the direct result of infarction due to arterial disease, with embolism or thrombosis; he says that

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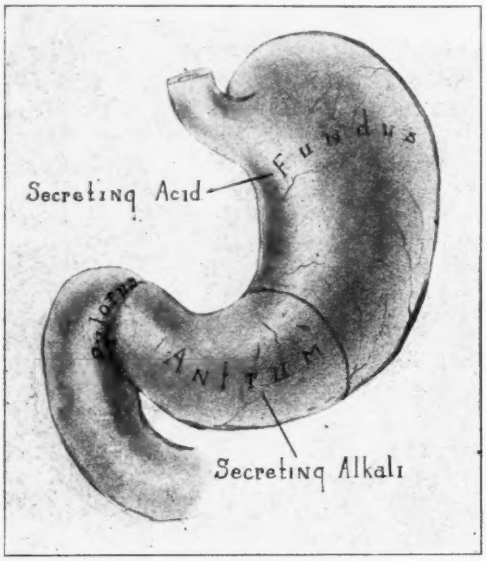
the ulcer progresses because of secondary infarcts in its floor, and that similar lesions can be found elsewhere in the body. One of the most striking facts about peptic ulcer is its seasonal recurrence, and Einhorn[1], in an exhaustive study of 800 patients finds the greatest number of recurrences in September and May; diet, pressure, and psychic trauma bring on some recurrences, though in 25% of all the cases the cause of return of activity could not be determined.

Irritating foods have not been very seriously considered as an etiologic factor, but a recent report on the high incidence of ulcer in native Abyssinians, who eat huge amounts of cayenne pepper, affords occasion for speculation[4]. The possible inter-relationship of ulcer, cholecystitis and appendicitis requires more than passing comment, and at times suggests an infectious etiologic connection. As Larimore[11] states, "Appendiceal disease has been associated in the majority of ulcer and cholecystitis cases." It is a sound doctrine that in the performance of surgical operation for ulcer or gall-bladder disease, the appendix should be inspected and, if possible, removed.



In arriving at a diagnosis of ulcer the important factors are careful history, examination of gastric contents, search for occult blood in the stools, and, most reliable of all, the x-ray. The history must never be neglected; in these days of highly perfected laboratory facilities the medical man or surgeon is too prone to rely entirely on these scientific procedures, and neglect the art of the history and physical examination. The old method of examining the stomach contents, first fasting, and then after the Ewald test meal, is a sound procedure, and should not be given up. This test has recently been modified or changed, with the use of a solution of alcohol, and also by the hypodermic injection of histamine, and these modifications in the gastric analysis, while having their place, should by no means be allowed to supplant the former technique[7]. In any case in which the diagnosis is in question the finding of occult blood in the stools is of great importance, as it means a definite organic lesion high up in the gastro-intestinal tract. The roentgenogram has come to be our most reliable diagnostic weapon, and is usually dependable in 90% of the cases[8, 13, 18]. I should like at this point to refer to an article by Eusterman[12] on syphilis of the stomach, in which he says that in any case of known syphilis, with no matter what gastric lesion, by x-ray, the disease should be considered and treated as syphilis, until proved otherwise.

In the consideration of ulcer of the stomach the first and most important question to be settled is whether the lesion may or may not be cancerous—whether it is definite cancer, or whether it is an ulcer which possibly shows the beginning of malignant degeneration. Of course there is no disagreement as to the proper treatment, as soon as a reasonably positive diagnosis of cancer can be made—the difference of opinion which is encountered is that concerning the handling of questionable cases—those in which one is not sure, and in which the possibility of malignancy is a matter which can be argued.

Brenizer[10] states that all ulcers in the antrum and body, along the lesser curvature, are benign, and all ulcers outside this zone are malignant; he further states frankly that he is not sure about the percentage of development of carcinoma in chronic ulcers, or whether cancer starts out as pure cancer in the beginning. MacCarty[14] finds that the earliest discoverable cancers have been in the borders of chronic ulcers, and that most ulcers of a diameter of 2.5 cm. or more, are already cancer (2.4 cm. equals the size of a quarter). He argues that cancer must develop in (1) normal mucous membrane (a rare occurrence), in (2) a polyp (equally rare), or in (3) a chronic gastric ulcer. The last he considers the most reasonable. In his opinion the great majority of gastric cancers develop in the chronic gastric ulcers, and 10% of all ulcers are, or will become malignant. He believes that exploration, with resection, is a safer procedure than expectant treatment; at the Mayo Clinic the operative mortality is 3-5%, while the occurrence of cancer is 10%. Alvarez[16] notes that most large lesions are malignant, and most small ones are benign, but the point which he emphasizes most strongly is that the roentgenologist cannot always be sure. He reports 507 cases, in 30% of which expert roentgenologists were in some doubt. Alvarez makes two remarks which to me are so worthy of comment that I quote them here. "Surely any one who—can say that there is no cause for worry in the treatment of gastric ulcer has a mind that

is impervious to evidence of any kind"; and "It seems obvious that the only way in which one can hope to cure cancer of the stomach is to excise it during the stages when it looks and behaves like a benign ulcer." One must not be lulled into a sense of security by the patient's youth, good general condition, or normal gastric acidity.

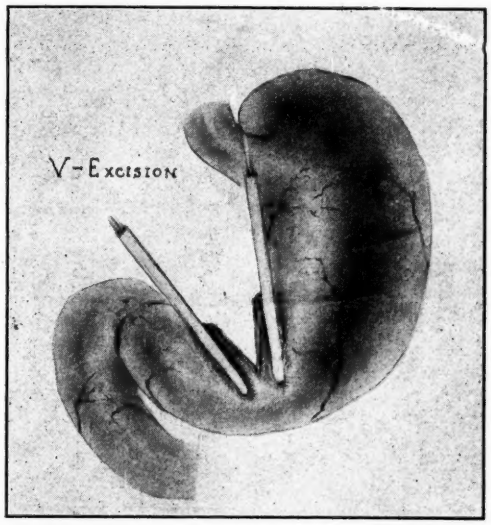
A case having been proved to be one of ulcer of the stomach, presumably not cancerous, a definite scheme of treatment and follow-up must be at once laid out. Lahey[6] insists that the patient shall agree to the following conditions—(1) three weeks in bed with careful dietary treatment, (2) weekly gastric lavage for analysis of stomach contents, (3) fluoroscopy at regular intervals, and (4) subsequent return for examination and check-up every two months. This is a sound procedure, and should be supplemented by occasional examination of the stools for occult blood. If at the end of the three weeks the ulcer is seen by x-ray to have increased in size, one must suspect cancer and operation should be advised. If, on the other hand, the ulcer has decreased in size, conservative treatment may be still further carried on. Either persistent pain or bleeding is an indication for operation.

In a large hospital, many working men are seen with gastric ulcer, men to whom loss of time is a matter of very grave importance. In these cases I prefer to advise operation at once, rather than taking a chance of healing a questionable ulcer with medical measures which often will not, or cannot, be properly carried out. The economic question, in these times of depression, is one which cannot be lightly brushed aside, and everything considered, the laborer with gastric ulcer stands a better chance of soon returning to his family as a wage earner, if he has an operation, than he does without operation. He certainly cannot afford a few weeks of medical observation, then at some later time an operation which will incapacitate him for further weeks.

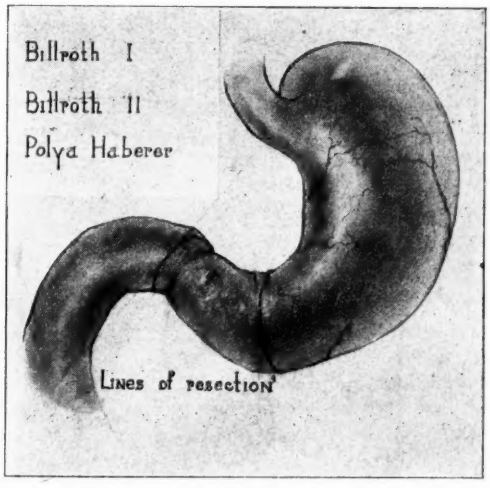
A recent new suggestion for the treatment of peptic ulcer, gastric or duodenal, is the use of gastric mucin, which has certain value in the neutralization of excess acid[17]. The mucin is prepared from the stomach of hogs and given to patients in frequent doses. In 12 reported cases observed from 2-5 months the results were encouraging.

Sullivan[26] lists the indications for operation in gastric ulcer as follows: (1) perforation, (2) hemorrhage, (3) doubtful malignancy, (4) hourglass deformity, (5) pyloric obstruction, (6) failure to heal with proper medical treatment, and (7) recurrence. These indications are more or less self-evident, the question of malignancy being the important one, and the one most difficult, at times, to evaluate.

Once the decision to operate has been made, the form of anesthesia must be selected with care, the surgeon never losing sight of the fact that these patients are usually middle aged or older, and the fact that pulmonary complications are common. Richards says that he sometimes can't help feeling that the danger of postopera-



tive pneumonia is greater than that of malignant changes in the ulcer, and the fear of postoperative pulmonary complications has made him very conservative in his treatment of gastric ulcer. Once the abdomen is opened, the first step is to endeavor to determine whether the

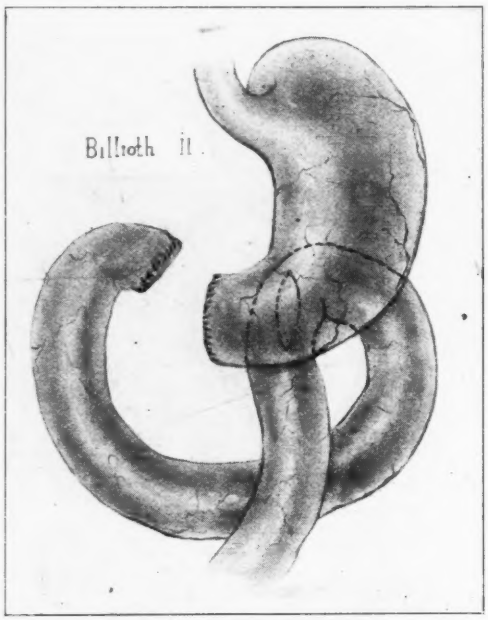


lesion is benign or malignant, and if malignant whether it can be entirely removed, and whether there are metastases in the liver.

At operation benign gastric ulcer should, if possible, be excised; there are numerous methods of resecting the stomach, and no one rule can be laid down for all cases. The technique will depend on the location and extent of the lesion and the skill of the operator. It is usually wise, if a local excision of the ulcer is done, to follow this by a gastro-enterostomy, because

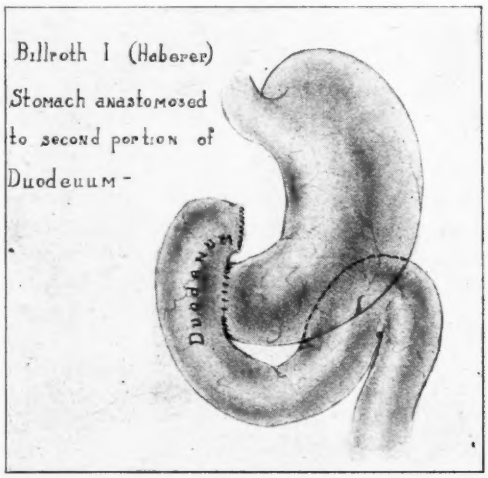
excision of a portion of the lesser curvature of the stomach may result in so much interference with normal peristalsis that proper emptying of the stomach is thereafter interfered with. In

some cases, ulcers of the posterior wall are so large and adherent that they cannot be removed, and it has been found, rather to one's surprise, that posterior gastro-enterostomy alone will cure 50% of them. This was reported by a Ger-



man surgeon, and recently Balfour[20] has reported 100 such cases followed for 5 years—50% were cured and 79% relieved. Postoperative dietary care should be meticulously carried out for a long time, and this will be mentioned below.

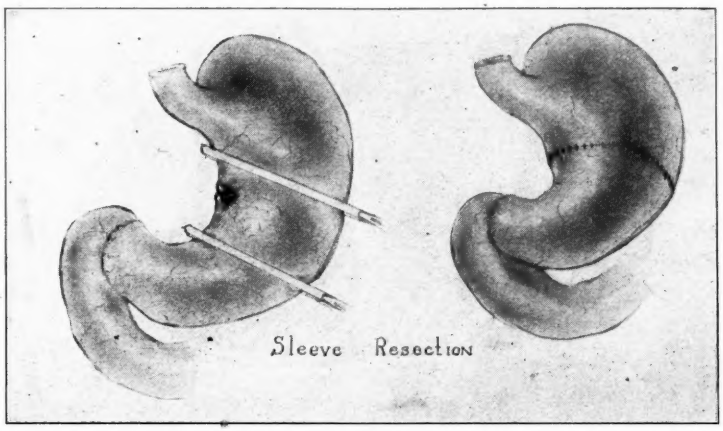
In the handling of a duodenal ulcer we start out with the assumption that it is not and never will become malignant. Cancer of the duodenum is so rare as to constitute a pathologic wonder. Furthermore, we start out with the idea that medical treatment is to be given a thorough trial before resorting to surgery. The details of the medical treatment will of course depend on the individual case; to say that every patient must go to bed and submit to the Sippy régime is to carry the matter to extremes. The acute recent case should, if possible, be so treated. The chronic patient, with mild recurrent symptoms, can perfectly well be handled as an ambulatory case, on a careful 6 meal diet. Blackford and Bowers[24] in a re-

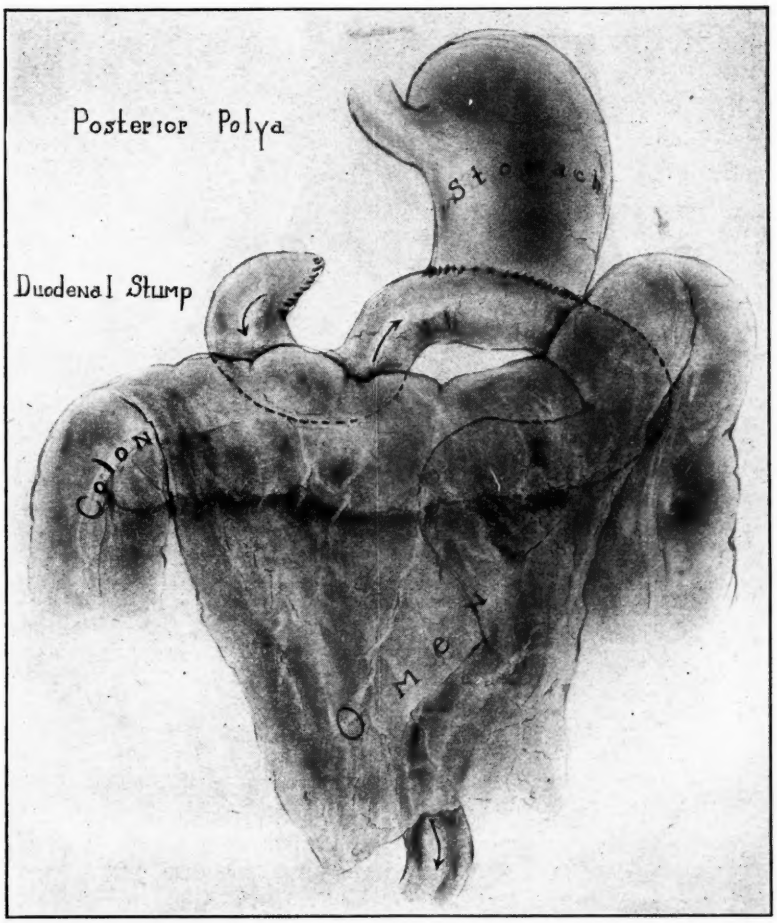


cent article report 60% cures of duodenal ulcer in patients who had only casual ambulatory treatment. Every possible source of focal infection should be looked for and relieved. Brown[19] has found that in 1224 cases of peptic ulcer (both kinds) 49.5% were cured by medical treatment alone, and 16.7% relieved—making a figure of 66% with satisfactory results; this figure is high; 20% of his cases eventually require surgery. MacVicar used to say that a duodenal ulcer is like an inguinal hernia—when the patient gets tired of fussing with it, it can be operated on.

As we learn more about duodenal ulcer it is becoming increasingly evident that cases for operation must be carefully selected, and preferably should be those that have definitely failed to be cured after long and careful medical treatment. In this connection Balfour[21] says that the duodenal cases which do badly after operation are those who are young, who have no pyloric obstruction, and who have a high degree of hyperacidity; Fremont-Smith and McIver[23] likewise say that the duodenal ulcers of long duration and severe symptoms have better postoperative results. In this connection I may say that it is very bad judgment to do any operation on the stomach, such as a gastro-

enterostomy, if at the time of operation, no ulcer can be demonstrated. The cases which have the most satisfactory postoperative results are those with mechanical obstruction, in whom posterior gastro-enterostomy is done. Operation should be advised and done after adequate treatment has failed.

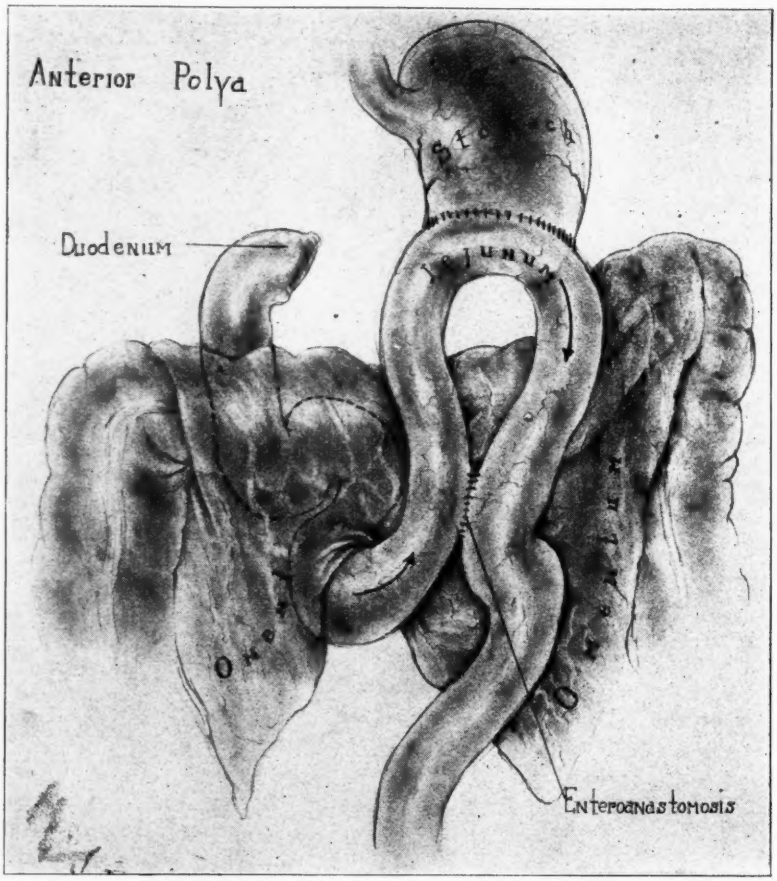


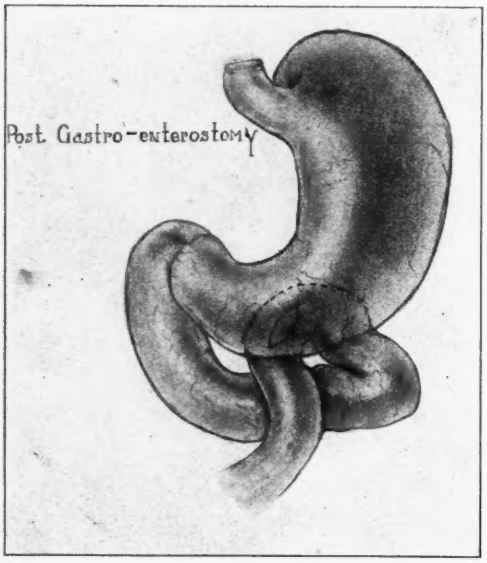


The high acidity is probably what initiates and maintains the ulcer, and it, in turn, is probably caused by dysfunction of the pylorus, which does not relax properly and allow normal regurgitation into the stomach of the duodenal contents, which are more strongly alkaline than any other fluids of the body[22, 36]. Any operation to cure peptic ulcer must, therefore, provide for this regurgitation of neutralizing juices, whether through the pylorus or through a new stoma.

When it comes to decision as to what operation shall be done, we at once meet two opposed schools—(1), those who prefer the simplest and least radical operations, such as gastroenterostomy or pyloroplasty, and (2) those who do more or less extensive gastric resections (this group includes most of the European surgeons). The most popular and generally satisfactory op-

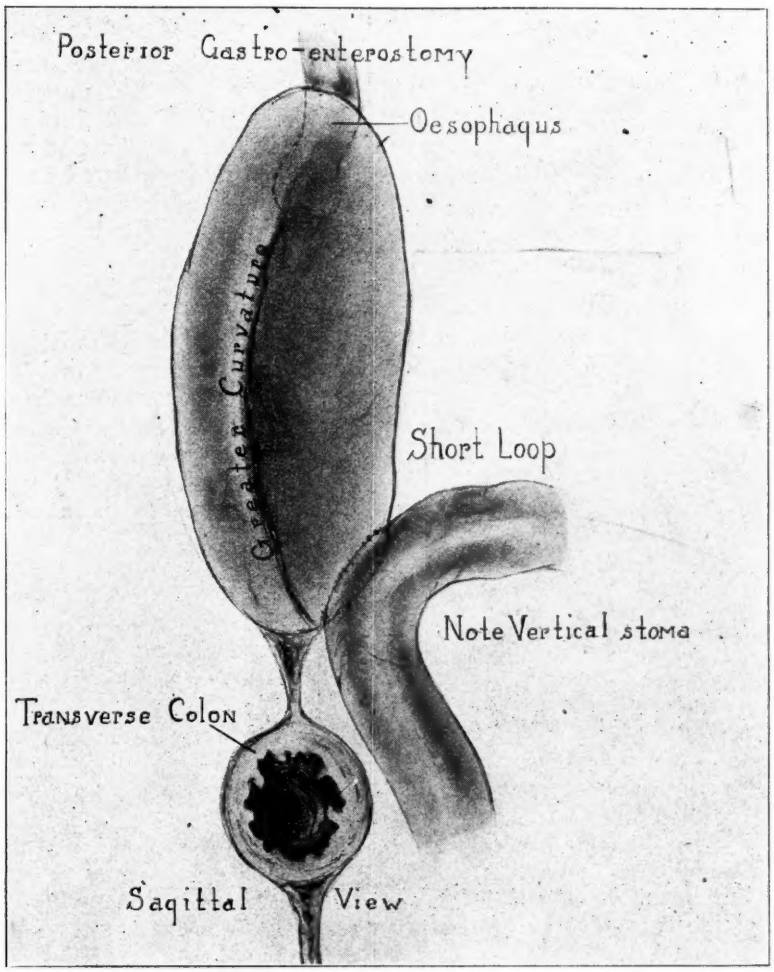
eration has been the gastro-enterostomy, which makes a new outlet in the stomach, allows food to pass out without irritating the ulcer, and provides for better neutralization of gastric acid.



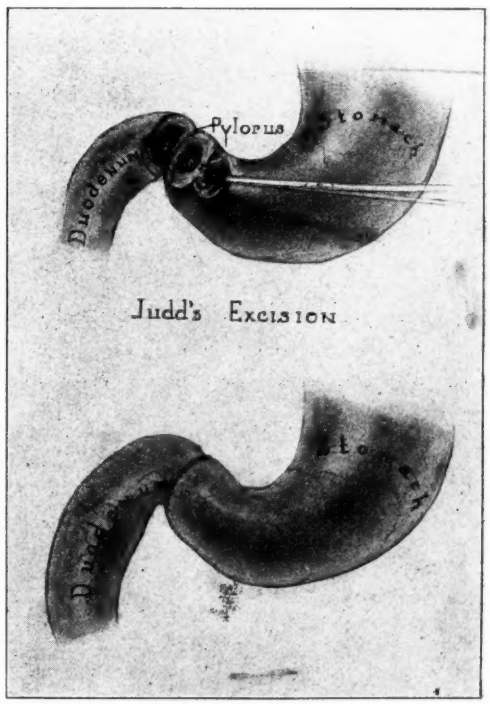


Judd has been an ardent advocate of a simple operation by which he excises the duodenal ulcer, and at the same time removes half or more of the pyloric sphincter, thus making a wide opening between the stomach and duodenum; he claims that this is simpler than gastro-enterostomy and, if anything, more satisfactory. Deaver and Burden[36] have written enthusiastically about a still simpler procedure, the submucous resection of part of the sphincter muscle; in this the lumen is not opened at all, and their results, to date, in 44 cases, have been very encouraging; the procedure is purely a plastic operation, and is not aimed at actual interference with the ulcer.

The question of resorting to radical stomach resections, for the treatment of duodenal ulcer, is one which has ardent supporters and equally ardent antagonists. As a general proposition the European surgeons are more radical than we are in this country, and they do a much larger proportion of extensive gastrectomies for simple duodenal and pyloric lesions. The reasons ordinarily advanced for the more radical procedure are first, the failure to cure by gastro-enterostomy, and secondly, the high percentage of gastrojejunal and jejunal ulcers after gastro-enterostomy. Berg[28] reports 515 cases of subtotal gastrectomy for both gastric and duodenal ulcer, and is strongly in favor of it, while Strauss et al[29] report 221 similar cases, their operative mortality being 5.4%. It is difficult to determine definitely the incidence of gastrojejunal ulcer after gastro-enterostomy because the figures vary so widely—for instance, Berg[28] puts it at 34%, while Fremont-Smith and Mc-

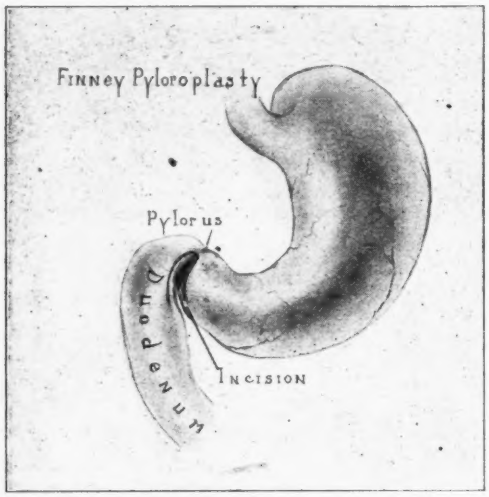


Iver[23] find it in only 1.7%. Klein[25] reports a few cases of duodenal ulcer, with very high acidity, in which he did partial gastrectomy with section of the left vagus nerve high up near the cardia; in his opinion this is a valuable procedure. A compromise between the simpler and more radical operations has been employed by Devine, who does a transection of the antrum of the stomach, without removing any of it, and then does gastro-enterostomy. This operation prevents the future access of any hydrochloric acid into the duodenum, but gives a new outlet to the stomach, and a means of regurgitation of the alkaline fluid through the stoma. I believe that the operation for duodenal ulcer should be the simplest one which the surgeon can do with reasonable hope of success, and I am against gastrectomy; at the worst, if the simple operation fails, further steps can later be taken.



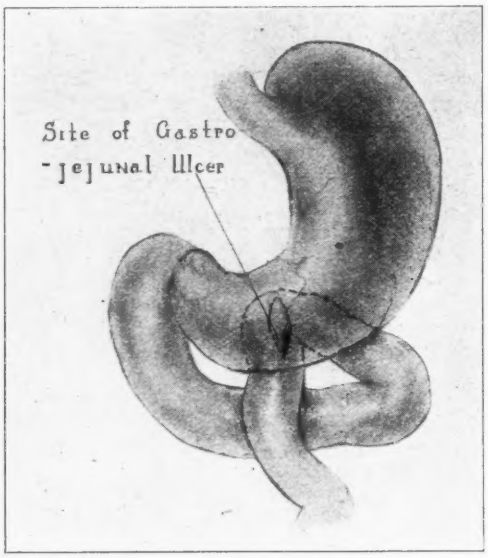
Reference has been made to gastrojejunal ulcer, a lesion which occurs on the margin of the gastro-enterostomy stoma or in the jejunum nearby; at times it is made worse by a gastro-jejuno-colic fistula. This condition is distress-

ing and hard to treat[16]; ordinarily these cases are considered too resistant to promise any satisfactory result from medical treatment, although Lahey[6] believes that dietary and rest treatment should always be tried. To Lahey's recommendation I would heartily subscribe, be-



ing influenced not a little by a realization of the difficulty of secondary gastric operations. It is hard to lay down a definite rule as to what operation should be carried out in these cases; they require skill, experience, and sound judgment. The following may be briefly stated:

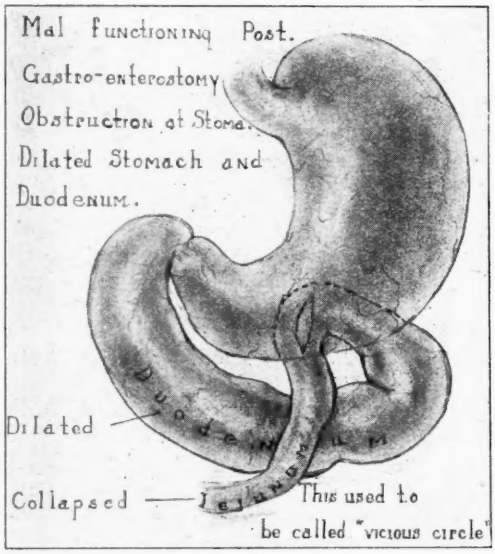
1. If the original gastro-enterostomy was done for duodenal ulcer, and the ulcer has ap-



parently healed, the gastro-enterostomy may be simply undone.

2. If the original ulcer, gastric or duodenal, has not healed, resection of the stoma, followed by partial gastrectomy, and some type of gastro-jejunostomy, must be done[30].

Bleeding from peptic ulcer is one of the serious events which arise often without warning, and may be extremely dangerous. It is well to remember that, as a general rule, bleeding ulcers do not perforate, and perforating ulcers do not bleed[32]. Hinton[31] has just reported 52 cases of hemorrhage from ulcer, in which there were 10 deaths—6 in unoperated and 4 in operated patients. The fatal cases were mostly in patients with negative or short histories. At times it is almost impossible to differentiate the bleeding from ulcers and that from a dilated ruptured vein (as in cirrhosis of the liver). Except in chronic ulcers, which will usually give a suggestive history, operation is notoriously difficult and dangerous, and should ordinarily be undertaken only as a last resort. For acute hemorrhage the patient should be put in bed, given nothing by mouth, fluids by clysis or vein, and morphine at regular intervals. If bleeding per-



sists one transfusion and then another, should be given before operation is decided upon; if operation seems to become imperative it should be undertaken only if at least one or more blood donors are present. Soper[33] has recently recommended the placing of a duodenal catheter in the stomach in these cases; the catheter removes clots and gastric contents and allows one to detect fresh hemorrhage, and he says that on the third or fourth day the catheter may be allowed to pass through the pylorus, and the patient be fed through it.

Acutely perforated ulcers require, of course, immediate operation with suture of the perforation[35]. It is our feeling that if the perforation has not lasted more than 6 hours there is usually no necessity for drainage. The question of gastro-enterostomy at the time of operation has been much discussed; this should at any rate not be done after 6 hours. In a recent report White and Patterson[34] find 60-65% cured of their ulcer symptoms by suture alone, and only 10-15% required later operation. The only rea-

son for immediate gastro-enterostomy would be very obvious pyloric obstruction.

GENERAL OBSERVATIONS

Certain points in regard to operation deserve brief mention here. In any case the form anesthesia must be selected with the greatest care. A patient with dilated stomach, from pyloric obstruction, must be kept in bed for several days before operation, the stomach emptied by tube once or twice a day, and food by mouth restricted. The valuable work of Shelburne and Egloff[37] has demonstrated the occurrence of edema as a result of the restriction of proteins, and observations are being instituted on the postoperative fluids, as we are gradually coming to believe that perhaps we force salt and sugar too much, and give too little protein. A few instances have come to our attention of so-called nutritional edema, a result of the withholding of proteins, and we are discussing the value of egg albumin. After any gastric operation the patient should continue with his diet, and consider himself still an ulcer patient[27]. It is hard to say just how long this régime must be carried out—we might say 6 months anyway, preferably 3 years—the optimum time would be for the rest of the patient's life.

I have presented to you the important facts in regard to peptic ulcer, as they appear to me. A general summary is difficult, but if I have to put the most outstanding points in a few sentences, they would be as follows:

1. Gastric and duodenal ulcers are principally initiated and maintained by disturbances in the acid-alkali balance, and these in turn are due to malfunction of the pylorus, more particularly failure of proper relaxation (achalasia) to allow regurgitation of alkaline duodenal contents. Any treatment must take this into consideration.

2. Gastric ulcer must be carefully watched, to be sure it is not cancer. If it is as large as a 25 cent piece, one should be very suspicious. In case of doubt, operation is indicated.

3. Duodenal ulcer may be treated medically until the patient elects surgery, and then the simplest reasonable operation should be done.

4. In hemorrhage from ulcer, operation should be undertaken only as the last resort.

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NEW ENGLAND SURGICAL SOCIETY

COLOR PHOTOGRAPHY OF PATHOLOGIC SPECIMENS*

BY GEORGE A. MOORE, M.D.†

ANY discussion of the history of pathology and pathologic illustrations of necessity is closely related to the historic development of anatomy and the methods of illustration employed. Knowledge of diseases had been gradually accumulating for many centuries prior to the systematic study of human anatomy. Ample opportunity was afforded for the study of the external manifestations of disease and it is evident from the embalming methods practiced that some investigation of disease of the internal organs was carried out.

The oldest written record of collation of anatomic knowledge and study of diseases is to be found in the Edwin Smith papyrus of about 5000 B.C., which is composed of forty-eight case reports. It "is compiled from earlier books and repeats a traditional lore which had already been codified".

The next oldest medical record is Eber's papyrus of about 1500 B.C. It is evident that the Smith papyrus was written by a "practicing and practical surgeon whose method of teaching was by the citation of case histories". He had a good knowledge of anatomy and was a keen observer of the clinical symptoms of disease. The Eber's papyrus is a collection of writings by many authors. While it deals more with mysticism it also represents the type of surgery used in Egypt at the time.

Goldschmid divides the history of pathology and pathologic illustrations into four phases according to the method employed. The first or prehistoric phase comprises the casual figures of pathologic lesions found on antique vases, stelae, papyri, frescoes, old manuscripts, primitive pottery, terra cottas from Asia Minor, especially Smyrna. The second phase is composed of figures on fugitive sheets in non-medical books, oil paintings and sculptures. Some of these are reproductions from Homer and from Aesop. A rather wide variety of diseases are represented; a votive tablet from Athens representing varicose veins, a Huaco sculpture depicting facial paralysis, terra cotta figures from Asia Minor showing probable syphilitic ulcerations about the nose and mouth, scoliosis, cancer of the breast, traumatic loss of an eye, fractures, malformations, Albert Dürer's colored print of syphilis, Ghirlandajo's rhinophyma and a painting by Simon Vouet showing suppurative osteomyelitis. These phases of pathologic history terminate with the closing years of the fourteenth century. It will be observed that only the external manifestations of diseases were depicted. What may have been known of diseases of the internal organs was not illustrated in any manner that has as yet been discovered. This is in accord with the history of anatomy. The first records of human dissections were made by Mondino about 1300 A.D. and were not of great scientific value. No extended study of human anatomy was made until the sixteenth century, 1502-1550, by Berengar von Carpi.

The third phase begins with the Dresden Codex of the fifteenth century and ends with the work of Mascagni in 1830. Human dissection was permitted by law and was carried out in many schools. As a result, much of the teaching of Galen and Mondino was discredited and the study of anatomy was put on a practical scientific basis. Coincident with the newly acquired knowledge of anatomy, investigation of pathologic lesions was carried out. Pathologic illustrations were published in books and many engravings, paintings and sculptures were examples of the work of this period.

The fourth phase was characterized by anatomic and pathologic illustration with didactic intention. It begins with Johannes von Ketham in 1491, who edited the "Fasciculus medicinae," a collection of current writings by medical men, the first book containing anatomic illustrations and the first wood engravings. Von Ketham depicted buboes, smallpox, warts, plague and many injuries. Of the many students of anatomy of this period, the works of Leonardo da Vinci, Vesalius, Albinus and Casserio have come down through history as holding the highest rank in the art of depicting anatomic dissection. During this period, wood and copper plate engraving and etching were introduced. It is of interest that von Ketham and Vesalius used color drawings to better represent their anatomic dissections.

From 1733 to 1792, Cheselden to Soemmering, was the era of the surgeon anatomists, who produced great atlases in copper and steel engravings. Morgagni's work, "De Sedibus et causis morborum per anatomen indagatis," published in 1761, was the first book dealing with pathologic anatomy as a science.

The publication of Sandifort's "Atlas of Pathological Anatomy" in 1793 marks the beginning of modern methods of medical illustration. This was the first book which depicted diseases of the viscera. Sandifort was successor to Albinus in the chair of anatomy and sur-

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gery at Leyden. A prolific writer, most of his work dealt with pathologic anatomy. Colored lithography was adopted in preference to the colored copper plates; the best early example of its use was in the work of Richard Bright.

The most widely known writer of this period was Cruveilhier. His atlases of anatomy and pathologic anatomy are among the best examples of medical illustrating. His greatest work, "Anatomie pathologique du corps humain," was published in 1828.

With the introduction of lithography medical illustrating lost the artistic beauty which characterized the work of da Vinci, Vesalius and their contemporaries. The work of Max Brödel of Johns Hopkins has done much to stimulate interest in this art in the United States and it has now become a specialty in our art schools.

The perfection of the photographic camera in the past fifteen or twenty years and the ease with which a knowledge of its operation is acquired had made it possible for many men to keep photographic records of patients and of pathologic lesions and specimens which they were unable to do in the past.

Within the past five years photographic supply houses have perfected plates for still colored pictures and films for amateur colored movies. Colored microphotography has also passed the experimental stage. The photographic principles upon which colored pictures are based consist of a film covered with an emulsion composed of starch granules of the basic colors of the spectrum. These basic colors take the corresponding color of the object on exposure. The plate is developed and fixed similar to a black and white negative and then by returning it to the developing bath a colored positive image is obtained. Infinite patience in the study of the intensity of light, shadows, length of exposure, etc., is required.

It has been my good fortune to have interested Mr. Arthur Keith of Brockton in assisting me in photographing my pathologic specimens. Many plates in my collection have been made by him. His hobby is color photography of flowers and outdoor scenes. After many experiments, he has devised an illuminating box and camera holder so that we are no longer dependent upon sunlight for satisfactory pictures. Thus far we have not attempted to have color prints made from any of the plates. Color printing, however, is on a practical basis, as many readers of the *National Geographic Magazine* can attest. The editor of this magazine in answer to my inquiry states that they print their color photos in the basic colors, red, blue, yellow, and then use black for contrast. As many of you know, the *Chicago Tribune* is now installing a color press and in a few months will issue the first daily newspaper in colors.

The present perfection of the photographic camera and the ease with which its operation is acquired makes it of great practical value in keeping photographic records of pathologic lesions. We are probably destined to see much more color printing in the near future. Whether the field of usefulness of the medical artist will be curtailed by color photography is problematic.

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Discussion

Dr. Philemon E. Truesdale, Fall River, Mass.: It is needless to say that color photography has taken a leap forward. The ordinary method of photographing a fresh specimen is to place it upon a table while it is wet, bleeding, soft, sometimes motile. With a camera, suspended and fixed, containing a panchromatic film, a photograph of the specimen is taken. Of course, the result of that sort of picture is never very satisfactory for purposes of illustration. It is spoiled by highlights and shadows.

The colored pictures made by Lumiere plate were perhaps first in the field. They were very striking in their effects. Lumiere depended upon a process in which he used these three primary colors, red, yellow, and blue. Then he obtained some secondary colors, combining red and yellow and obtaining orange; combining red and blue and obtaining purple; and all these various colors brought into the picture made the result quite striking.

The photography is a comparatively minor part of the whole procedure of a colored picture. The color film, as Dr. Moore just said, contains fine granules of starchy material of red, blue, and yellow. When that film is developed, it is just black and white, but when it is passed through another solution, these colors are brought out.

A half-tone picture is made by placing a screen between the camera and the object photographed. Next to this glass screen, which is subdivided into innumerable little squares no larger than a millimeter in size, there is a color filter. It is necessary to take three pictures in order to get all the colors that are going to be required in the negative.

The colored theatrical picture has been shown quite frequently. There are three processes: technicolor, multicolor, and magnacolor. They are all patented, and the method of making the picture is not in the photograph, but in developing the film. Ordinarily the camera has two

films. Those films pass before the lens and are wound on a drum together so that there are two synchronized pictures taken, each on a different film. In the development of the picture, a single film is used which has an emulsion on both sides. In this way the primary colors are brought out in the print.

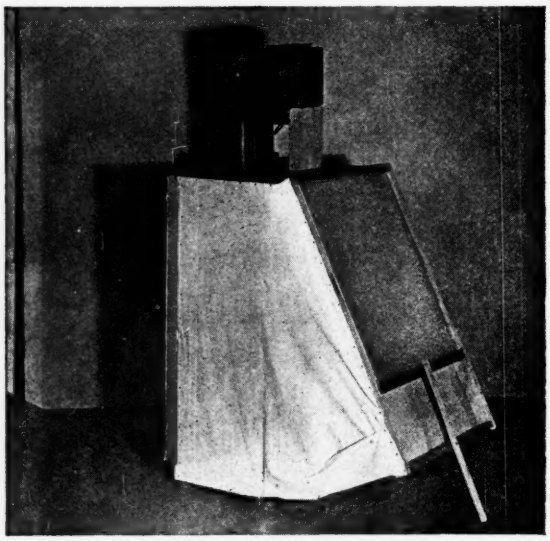
I am very much interested to hear what Dr. Moore is doing. It is a remarkable achievement for an amateur to develop such splendid color pictures.

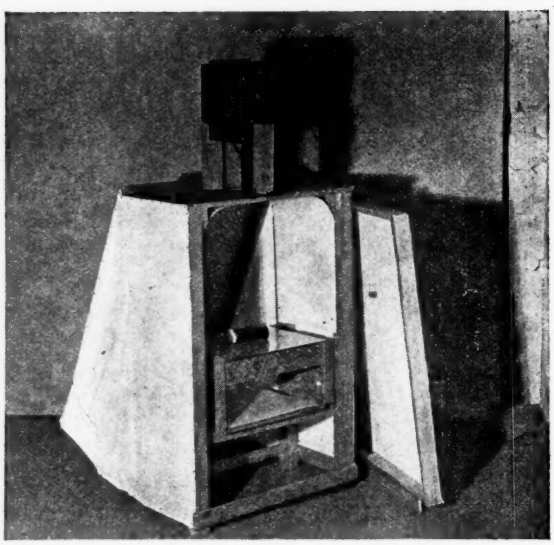
There are different ways of preparing the specimens for color photography. The wet specimen, the bleeding specimen, is not good material for color photography. It is necessary first to get the colors brought out in the specimen. That can be done by treating it with illuminating gas or preserving it in Keiserling solution. It should then be placed in a clear solution of alcohol or sterile water and photographed while it is fixed.

All this work is very expensive. When it is reduced, I am sure that the method will have a wide field of usefulness.

Dr. Frank H. Lahey, Boston, Mass.: I am flattered by the assumption that I know something about color photography. I don't know a thing about it and never have had any experience with it. I have enjoyed seeing this and I think it is a very beautiful demonstration.

Dr. George A. Moore, Brockton, Mass.: I would like to take a few minutes to demonstrate again two of the slides. It may be helpful to those interested in this work to learn how shadows have been obviated in the pictures shown. The pebble glass in the front of the illuminating box diffuses light. It then strikes a flat white surface in the back of the box, which reflects and further diffuses the light. One other point is the absence of any apparent flattening of the specimens on the side upon which they rest. This is effected by having a glass support for the specimens about six or eight inches above a flat, white background. The white background reflects the light, giving a partial effect of the third dimension.





THE TREATMENT OF RAYNAUD'S DISEASE BY COLD

Dr. William J. Kerr, Professor of Medicine at the University of California, advocates the application of cold to the affected parts in Raynaud's disease.

While working with Sir Thomas Lewis, a British physician, Dr. Kerr studied the effect of the application of cold, equal to that of the temperature of melting ice, to the extremities made cold and pale by spasm of the arteries and found that relief followed.

THE HOMICIDE RATE IN THE UNITED STATES

According to Frederick L. Hoffman the homicide rate in this country has mounted from 5.01 in 1900 to 10.8 in 1931. These figures do not include accidents or suicides but only consider human deaths resulting from wilful actions varying from involuntary manslaughter to deliberate murder.

The cities of New England are far down in the list of 164 recorded for 1931. Southern cities lead with rates from 30 to 55 per 100,000 residents.

Among the large cities Chicago leads with 14.1 and Boston has only 3.6 and is proportionately well behaved.

Canadian cities have a very low rate of 1.61.

Only the cities of Mexico City, Bangkok, Singapore, Cairo, Alexandria, Havana and Leningrad approach the United States figures. The predominant cause with us appears to be the ease with which firearms may be procured.

A CASE OF SYPHILIS OF THE LIVER SIMULATING ACUTE SURGICAL ABDOMEN

BY AARON FELDMAN, M.D.*

THIS case of syphilis of the liver is reported because of its acute onset, the size of the gumma, and its prompt response to treatment.

A twenty-year-old, single white male was first seen on December 8, 1929. He was lying in bed apparently in pain with a cold sweat on his forehead. He had had a slight pressure pain in the right upper quadrant for six or eight weeks. There was no nausea or vomiting and the pain was not referred. The stools were normal in color and there was no blood. On the day before he was seen by the physician, he had considerably more pain in the abdomen, but he was able to work. The next morning, while dressing, he fainted. On being put to bed, he fainted again. He was seen by the physician shortly thereafter.

The patient was in shock, with a temperature of 97° and pulse rate of 120. The skin was cold and clammy. The pupils were equal, regular and reacted well to light and accommodation. There were no abnormalities in the nose, ears, mouth and throat. The teeth were in perfect condition. There were no enlarged glands in the neck. The lungs were clear and resonant throughout. The heart was normal as to size and no murmurs were elicited. Examination of the abdomen revealed board-like rigidity, spasm, and tenderness over the right upper hypochondrium, extending to the mid-line and down to the umbilicus.

It was decided to take the patient to the hospital immediately, but on attempting to remove him from the bed, the patient collapsed twice. Surgical intervention seemed imperative. Therefore, under gas oxygen anesthesia, a right rectus incision was made. Upon opening the abdomen, the liver was exposed and showed on its anterior surface a dome-shaped mass about the size of a cantaloupe, extending into the left lobe of the liver. There was a definite line of demarcation between the mass and the liver substance. It was hard, and on probing revealed no abscess material. Several small sections were removed for pathologic examination. The wound was packed, a drain inserted, and the abdomen closed. The gall bladder was slightly inflamed but the patient's condition did not warrant any further surgical procedure.

The Wassermann and Kahn reactions on the blood, taken at operation, were positive. The sections removed at operation were examined microscopically by Dr. F. B. Mallory who reported infarct necrosis with chronic inflammation, suggestive of gumma. Antiluetic treatment was immediately started. After three injections of neoarsphenamine, the abdominal mass disappeared. The patient made an uneventful recovery from operation and now reports for continuation of antiluetic treatments.

The past history and family history were significant. He had a hernia operation in 1926 at which time the blood Wassermann was found to be positive. He denied venereal infection by name and symptom, but admitted exposure. He had measles in early childhood. There was a strong family history of syphilis. The patient's older brother, aged twenty-five, had a strongly positive blood Wassermann and Kahn. He denied venereal infection, was married and had one healthy child of five years. His wife and this child have negative Wassermann reactions. The patient's mother died in a hospital at the age of forty, of heart disease, with symptoms suggestive of syphilitic heart disease. She had had three miscarriages. The blood Wassermann of the patient's father was negative.

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COMMENT

The classical picture of congenital syphilis of the liver consists of frank, congenital stigmata, poor nutrition, and enlarged liver and spleen. There may be present cirrhosis with ascites and jaundice. The finding of a positive blood Wassermann establishes the diagnosis beyond doubt. According to Tice, the manifestations of syphilitic disease of the liver are sometimes very indefinite, and may be present without any concomitant physical stigmata. The late congenital cases occur between the ages of ten and twenty. The frequency with which the liver is involved in syphilis varies with different authors.

J. L. Allen found thirty-seven cases of gumma of the liver among 11,629 autopsies at St. George's Hospital. Flexner at the Philadelphia Hospital found eighty-eight cases among 5,088 autopsies. At the Johns Hopkins Hospital among 2,300 autopsies, Osler reports forty-seven syphilitic livers and nineteen cases of gumma.

The case herein reported is of interest in that it simulated an acute surgical condition of the abdomen. It demonstrates further the much rehearsed, but not always heeded fact that syphilis is the great simulator of any disease. The symptomatolgy in this case was very dramatic and does not conform to the usual description of syphilis of the liver. The prompt response to antiluetic treatment is also somewhat unusual. There were no signs of congenital syphilis in this case, but the evidence of familial syphilis is too great to be entirely ignored and is good presumptive evidence for congenital syphilis in the patient. The current viewpoint that syphilis is transmitted only by the ovum is also demonstrated in the family history of this case.

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THE COORDINATION OF A COMMUNITY'S HEALTH SERVICES*

BY LOUIS I. DUBLIN, PH.D.†

I BRING you first the very warm greetings of the parent health organization, the American Public Health Association. The Association is well aware that the strength of the public health movement in our country lies in the work of such local bodies as yours. It was in Boston that the public health movement which has taken on such impetus in our day began more than eighty years ago. I am glad to recall the pioneer services of Shattuck, Walcott, Jarvis, Bowditch, Sedgwick and the others now gone, who created the public health profession in America; who encouraged the American Public Health Association at its beginning and who organized in your Commonwealth the first health department in the United States and then helped to spread the good example through every corner of the country. Inspired by a broader vision of the health problem of the present day your League continues this excellent tradition. Would that there were health leagues like yours in every large city of the country. The public health movement would be greatly accelerated if each of the larger communities could have the organized and devoted services of its leading physicians, its public health personnel and its public-spirited citizens.

Let me also bring you a cheerful note on the health of the country. The sickness and deathrates of the people have never been lower in spite of the extensive unemployment and the hard economic conditions which prevail. It is very gratifying that the hardships under which many are forced to live these days have not as yet expressed themselves in reduced vitality to such a degree as to be reflected in our indices of sickness and of death. This situation is, I believe, to the everlasting credit of the official and voluntary health and welfare agencies of our states and cities, and proves that our communities have been wise and foresighted to set up and support such services. I shudder to think where we would now be if we did not have well organized medical, public health and welfare societies, well articulated to serve our people in the present emergency. Think what it would mean if we had to create such services de novo—,how impossible it would be to train personnel, to develop an esprit de corps and to work out new contacts with the public. We have these, and they are functioning as never before for the public good.

The situation I have described in general is particularly true of Boston. The last report that I have received from your health commissioner, Dr. Mahoney, indicates that the city continues to enjoy excellent health conditions. The deathrate last year, 14.04 per thousand, compares very favorably with that for the year before, and both figures are close to the best on record. You have actually had fewer deaths of infants, from tuberculosis, from pneumonia and from diarrhea and enteritis. These are the very conditions which usually are the first to reflect hard times. The very low deathrate for tuberculosis is particularly surprising. Nevertheless, such has been the health organization available to the people that the recent favorable trends in these conditions have been maintained Apparently, no one has been seriously neglected. If there have been increases in the mortality from certain causes of death, as for example, from the degenerative diseases, these are inevitable and merely the continuation of tendencies which result from the saving of lives at the younger ages.

It is not surprising that conditions are so favorable in your city, for you have always prided yourselves on the maintenance of the highest standards of public health service. The health budget of Boston amounts to about $1,400,000 annually, which represents a per capita of about $1.80 excluding the cost of contagious disease hospitals and tuberculosis institutions. Private agencies are expending well over half a million dollars for public health work in Boston. This total of $1,900,000 is equivalent to a per capita of almost $2.50 per annum. I believe that if all of the items which go into the health budget from all sources were included, the figure would be considerably more, perhaps almost $3.00 per capita. All of which should be especially gratifying to you because this figure places Boston at the very head of the large cities of the country in the per capita amount of public health expenditures. You are well in excess of such cities as Syracuse, Newark and Detroit which in recent years have attempted to meet their health obligations fully. The city of Boston thus occupies an enviable position in providing the wherewithal for health services. Your budget begins to approach adequacy for the work that public health officials know how to perform.

What is particularly pleasing is that there has been virtually no curtailment in the health budget of the city in these times, when it is fashionable everywhere to cut municipal expenditures, sometimes indiscriminately. We at the

*Address before the Annual Meeting of the Boston Health League, February 25, 1932.

†Dublin—President, American Public Health Association. For record and address of author see "This Week's Issue," page 962.

headquarters of the American Public Health Association have been very much distressed by reports from all corners of the country that appropriations for health work have been reduced, that trained personnel has been dismissed and that important activities have been considerably contracted. One municipal health department recently lost 100 of its staff; one state department suffered a reduction of over $70,000 in its health budget. Apparently you know better than to make indiscriminate reductions in this type of public service and thus break down efforts which have taken years to build up. I may, therefore, on this occasion express my highest respects for the wisdom and devotion of your Mayor, who in the present emergency has kept your service intact. Mayor Curley's interest in public health work dates back many years and is generally appreciated throughout the country. It was he who as Mayor in 1914 to 1918 made possible the first health unit of the city and during his term of office in 1922 to 1926 encouraged the George Robert White Fund to erect a chain of health centers in such sections of the city as appeared to need them the most. As one of my Boston friends wrote me, "I have yet to approach Mayor Curley for any appropriation for public health and be turned away. Such a man well deserves the title of a real 'health mayor.' "

It is hardly necessary for me to discuss, in Boston, the thesis that public health work pays. You have demonstrated its truth better than anyone else. Public health work, when it is carried on as efficiently as here, pays handsome dividends in return for relatively small expenditures. Even in Boston the total per capita for health service, official and unofficial as we have said, is less than $3 per capita. The savings resulting from this service are almost incalculable. I have estimated the value of human life in terms of its earning power. The losses involved when an able-bodied man or woman dies prematurely, or is incapacitated by illness are extremely large running into sums like 30 or 40 thousands of dollars per individual, depending, of course, upon the man's income class. We ordinarily lose sight of the great stakes in the health campaign. The deathrate in the last generation has been reduced from 20 to 30 per cent in the United States, and this means the addition of billions of dollars to the vital assets of the country. The expenditures for public health in comparison seem ridiculously small in the light of its accomplishments.

I believe that every community, if it realized the amount of money that was actually being saved through the prevention of sickness, through the postponement of premature death, and through the increased vitality of its people, would put more rather than less into its preventive health work. Health departments in our country have never suffered from inflation. Health officers have always been notoriously underpaid. Our health personnel has not been overextended. Therefore, in these times of stress, such contraction as is possible in other services is not possible here and it is poor policy indeed to save pennies and thereby throw out of gear services which conserve life and health. It would hardly do at this time to add another problem like the care of unnecessary sickness to our present perplexities of unemployment and of extensive family relief.

I wish, however, on this particular occasion to do more than bring you felicitations from the parent organization and polite messages praising your accomplishments in the field of public health. Many of you know me as a critic and inclined to use opportunities of this sort to raise issues which if they are sometimes contentious, are at least intended to be constructive and useful. Boston has always offered the opportunity and the platform for an honest discussion of pressing problems and I hope I may not be trespassing on your generous attention if on this occasion I raise a few questions which bear on the health work of your city.

I wish first to review a few problems of health organization as it is administered by your efficient health commissioner. Fortunately I have had at my disposal not only the full report of your Department, but the results of a study made by the field staff of the Committee on Administrative Practice of the American Public Health Association. A comparison of the figures leads me to say that even if your total budget approximates adequacy, better results could probably be achieved if the amounts available for certain services in the health department were somewhat readjusted. There is reason to believe, for example, that your laboratory has been somewhat neglected. You are spending about half as much as is necessary to give service in line with the excellence of your other branches. I would infer also that there are deficiencies in the services of communicable disease control and of vital statistics. While you have an able vital statistician, I do not believe that you have given him sufficient help to make possible the compilation of health facts and figures by districts. The compilation of figures for the sanitary tracts during the recent census will prove extremely helpful to you. A little more money put into this service should give you a wealth of information about actual health conditions in various parts of the city and this will lead you to concentrate your service where it is most needed. There are indications that your nursing service would profit from a little more support. The extensions I have referred to should not necessarily involve larger expenditures but, as I have said, may be

made possible through reducing the amounts now spent for sanitation. This service, I believe, takes more of the total budget than is necessary or usual in most American communities. To an outsider, it would seem possible to divert as much as $50,000 from sanitation toward the building up of more adequate services in the other fields I have mentioned.

As you know, more and more emphasis in municipal health administration is being placed on preventive measures and on public health education which are likely in the long run to be very productive of results. I am delighted to learn that the health department has recognized the importance of public health education recently and has appointed a health educator. It will be interesting to see what support you give him and the progress he makes in developing a well-informed public opinion that will support the program of the Commissioner and of your own society.

There is room for increased public facilities for the care of chronic disease. The establishment of a research unit in chronic disease presents large possibilities. We are learning more and more that certain chronic sufferers may be much helped and their lifespan increased through treatment given at the proper time. Otherwise, they may become very expensive public charges, a costly burden of little use to themselves or to any one else. There is much to be gained from the solution of the chronic disease problem. Your idea of establishing such a study unit as a part of the Boston City Hospital has much to commend it.

I understand that your Committee on Mental Hygiene has made certain constructive recommendations. This is in the right direction because more and more we are beginning to realize the important problem that mental disease presents, the opportunity there is for preventive work, and the gain that is to be derived from early curative care. Here is fertile ground for development and while I have no recommendation as to the exact amount of the appropriation that should be made to the health department, I do believe that a substantial allotment toward mental hygiene would be money wisely spent by the municipality. Finally, your health department would profit from an extension of its work in social hygiene. You do not do quite enough in venereal disease prevention and care. This is more and more recognized as a municipal function because, ordinarily, these cases do not receive the care they should, except through official intervention. Very promising work along these lines has been conducted in Detroit and I believe the methods devised by Dr. Vaughan are very likely to be accepted by most municipalities in the next decade.

But more important than the internal adjustment of the several items in your health budget is the much larger question of the character of the health service which you are seeking to build up in Boston. What I would like very much to do tonight is to raise the issue whether the time has not come for us to define anew our conception of what constitutes the proper field of health work in a great city. Heretofore, it has been orthodox and fashionable to speak of the preventive health service as properly the function of the community. The bedside care of the sick, except in cases of communicable disease which may become a public menace, has always been left out of consideration. That, we are told, is the private business of each individual and of his doctor. We have hermetically sealed from each other the two aspects of the same health problem, namely, the prevention of disease, on the one hand, and its treatment and cure, on the other. My thought is that we must soon bring these two arbitrarily separated considerations together and integrate both our thinking and our service with regard to them. We no longer, when a man is sick, think in terms of the special organs or parts of the body that are affected. Good medicine tells us that the whole individual must be treated. In like manner, we must approach the health problem of the community as a unit and not segregate the preventive and the curative services. We can make no progress if we emphasize and differentiate specialties; we must seek rather to organize and unify all phases of the health movement into one effective entity.

I raise this difficult question all the more on this occasion because the Health League has already done so much that is constructive for the people of Boston. You have stimulated the growth and the development of your Department of Health. You have coördinated the activities of the private agencies engaged in public health work. You have helped to establish the health centers which accomplish such valuable service in the preventive field. Here we find locally administered, the best type of clinics for the care of mother and child, for the prevention of tuberculosis, for the discovery and correction of physical defects and for a great variety of health services which the people of Boston are fortunate enough to receive. There still remains, however, what is undoubtedly the most important aspect of health work in any community, namely, the care of the acutely sick, although you do have the splendid services of your visiting nursing organization. There is lacking only the bedside work of the physician to make the picture complete*. Somehow or other, the doctor must be brought into conjunction with the other personnel and activities al-

*I have just learned that you have interested yourselves in this very problem—having secured funds last winter for four private agencies which provide medical care for the sick in their homes.

ready so well developed in order to produce an integrated and unified program of health service. It is especially desirable that you should do this because you already have such abundant facilities at your disposal. You have established contacts with the public and enjoy their complete confidence. Nowhere in the country, I believe, is there an opportunity similar to that in Boston. By means of a relatively slight adjustment and extension of service, you can complete the circle and give the public good medical care closely associated with preventive work and forming an integral part of it.

What I am proposing is nothing less than a recommendation that you lead the way to the solution of one of the most pressing social problems we still have with us, namely, the medical care of the sick. At every point, we hear of the inadequacy, of the high cost, and of the generally unsatisfactory state of the medical facilities available to the great mass of people. In your own city, you receive at a cost of $3.00 per capita a great variety of health services which are extremely well administered. At the same time, you probably spend ten times as much for curative medical care and yet you feel at every point its striking inadequacy. The Committee on the Costs of Medical Care has spent five years and three-quarters of a million dollars bringing together the facts bearing on this problem. There can be no two ways of reading their findings. The Twentieth Century Fund, inspired by your own Mr. Filene, has likewise studied the situation and is recommending as a result, a possible solution through the establishment of medical guilds. Everyone is aware that in our communities large numbers of people receive no care in sickness, even when they are acutely and seriously ill. Sickness surveys that we made some years ago showed that the proportion without medical attention often was as high as 30 per cent. Even when they received treatment, it is often unsatisfactory because of the patient's financial difficulties. Sometimes it is because of the limitations of the doctor acting without guidance or supervision. Great sums are as a result spent in self-medication and for quackery of all types. The doctors on their part are equally dissatisfied. The great majority of them earn only a very limited income and are burdened by economic difficulties that arise out of the expensive equipment and office facilities that everyone practicing individual medicine finds it necessary to have.

As at present administered medical service for the common people is an almost impossible attainment, because of the wasteful procedures inevitable with the system of individual practice in an era when highly developed skill and expensive and extensive medical facilities are necessary. It is impossible, in a word, for the average family whose income is from $1,200 to $2,000 a year to obtain necessary medical care and to pay the bills that accrue. Either the family must fall back on charity, which is degrading to it and unfair to the physician, or it must beggar itself in meeting obligations incurred through no fault of its own, which is equally unfair. Another way must be found. Everyone knows that, for the masses, the day of the individual practice of medicine is over. There is no escape from that proposition. To repeat, I hope that the Boston Health League, which has pioneered in so many directions and has been so instrumental in perfecting local community health organizations, will now take on the solution of the last and most important problem, namely, how to bring together all of the health services of the community and to organize them whether preventive or curative, into a coördinated unit under the joint leadership of the medical profession, public health officials, and public-spirited citizens.

As to details, I have no easy solution to offer. I realize full well the many difficulties that it will be necessary to overcome. There will be many questions to answer—how to select the most promising health district, how to bring the local physicians into the picture, how to associate the medical center with the hospital of the district, how to finance the service received, whether by the usual methods of fees or by some annual or monthly payment in the nature of a premium which each family must pay. How far can the municipal government go in furthering such an undertaking? Can it make a sizable contribution to the costs involved, or must this experiment remain for some time at least a private undertaking supported by the private agencies and the local residents? It is quite clear that the method of administering a curative service from a health center is a matter requiring a great deal of further study. I hope that you will agree with me sufficiently to appoint a representative committee to study for a year the problem I have outlined. Such a committee will find much to interest it. There are other groups in dozens of locations that are very much concerned with the same question. You will find much valuable information in the files of the Committee on the Costs of Medical Care, but most of all in the everyday experience of those who serve the medical needs of the common people in hospitals, clinics and dispensaries. I am confident that your committee could bring in a useful and constructive report and that you will be able to recommend feasible and practical procedures.

It is my hope, finally, that such a plan as I have suggested may have the support and sponsorship of the organized medical profession in Boston. This would, I am confident, insure its success; without such support, the plan would be

stillborn and useless. I think I know the temper of the physicians of Boston. I have felt the zeal and the lofty spirit which emanates from your medical leaders and teachers. It will mean much to the new generation of doctors who are training in your medical schools to have this experiment before them and to be aware of its implications. For all these reasons, I am hopeful that the profession will meet the challenge and the opportunity. They can make no greater contribution to medicine and to social welfare than through the right solution of the problem I have raised.

Moreover, when the dust has cleared and the new procedures are established, I believe it will be found that the best interests of the medical profession, as well as those of the public, will have been safeguarded. The integration of curative with preventive medicine and the application of group methods of work should fully utilize every medical resource of personnel and of equipment. The increased demands of the public for medical service once it is brought within their power of purchase should provide new opportunities to every well-trained physician. The organization and supervision which the plan calls for should, in fact, prove a constructive force in training young doctors. It should establish a new esprit de corps in the profession. No one stands to lose in the new arrangement. The public will receive more and better care; charity will be, for the most part, if not altogether, eliminated; doctors will be more fully employed and their income assured. I am confident that, when you have worked out your experiment, your results will serve as a beacon, lighting the way for every other community in the country.

THE NEED OF OCCUPATIONAL THERAPY FOR CARDIAC PATIENTS*

BY PAUL D. WHITE, M.D.†

IN the first place there should be no doubt at all in our minds about the existence of the need of occupational therapy for cardiac patients, no matter what the kind of heart disease, what the age, and whether the patient is convalescent or still subacutely ill. In severe acute illness, as in the case of marked congestive failure, highly toxic acute rheumatic infection of the heart, and the febrile stage of coronary thrombosis absolute rest is essential, but after these periods are passed and in many other cases of heart disease, not excluding subacute bacterial endocarditis, some form and degree of occupational therapy is valuable and much too often neglected.

The common definitions of occupation are the act or process of occupying or taking possession, and the principal business of one's life, vocation, calling, trade—which definitions do not concern us now. The other definition which does concern us is this: "that which occupies, or engages the time and attention". There are many different things which may occupy a person's time and attention, some of them foolish, or even harmful. It is naturally of worth-while occupations that we think in occupational therapy. However, these occupations need not be useful from the ordinary utilitarian point of view—they may be almost wholly valueless from that aspect and yet be eminently useful in aiding in the convalescence and rehabilitation of the invalid. For example, reading or being read to, sketching or painting, writing letters, stories or poems, keeping a diary of current events, playing chess or other games, making or solving picture or cross word puzzles, collecting flowers, minerals, beetles, or stamps, and gaining knowledge, authoritative or not, of some phase of archeology, history, literature, science, or art, no matter how minute, may be really much more worth while than weaving baskets, sewing, or making pottery. Of course the occupation must suit the age, intelligence, and strength of the patient but we are apt, I believe, to underestimate the capacity of our charges. At first the mind may be allowed more activity than the body and yet it should not be pressed too fast, for a tired brain and nervous system may react unfavorably on the heart. We must remember that some heart troubles like angina pectoris, cardiac arrhythmias, and neurocirculatory asthenia (the soldier's heart) are as much or more dependent on the stability of the nervous system than on the physical state of the heart itself.

Gradually as we progress in convalescence we should combine physical exercise with mental exercise for it is the proper mixture of the two that is best. In the physically inactive stage after the most acute illness is past history, massage and passive exercise may help to restore the circulation in the extremities. I want to make it clear that I believe firmly in the value of physical exercise in the case of those cardiac patients whose hearts can stand it and they make up about 95 per cent. of the lot. Of course the simplest kinds of exercise are walking and arm motions. If we can combine these exercises with a special interest besides that of restoring health we add much to their effectiveness and to the interest of life. For example, a person may take a walk in the countryside or woods, strolling along in the search for various kinds of flowers, ferns, mushrooms, mosses, trees, rocks, insects, or

*Read at the Annual Conference of the Massachusetts Association for Occupational Therapy, Boston, November, 1931.

†White — Physician, Massachusetts General Hospital. For record and address of author see "This Week's Issue," page 962.

birds, or he may walk in town or city to explore an historic site, to examine architecture or to visit friends, library, or museum. Conveyances, like automobiles, cannot be discarded, but they should be used only in covering long distances, or in transporting absolute invalids.

My next point is that we must have a plot behind our occupational therapy. We should look years ahead. What will prove to be the best forms of occupational therapy for our individual patient to engage his or her attention in the indefinite future? Let us make worth-while plans at the beginning so that there need be no great break later on. Of course it will often be necessary to experiment a little at the start, but once we are well under way let us try to establish a permanent occupation, be it eventually vocation or avocation. For example, in a child it must first be connected with elementary schooling, leading up at last to a life job suitable for that child's brain and body; in the case of an adult it should be something that can be turned to as a real vocation on recovery especially when the old job must be given up, or it may be something that can be turned to for pleasure and rest in times of leisure later on, or in older people it may be something to retire to after the regular life-long job is over. Happiness is a vital factor in the maintenance of health and the proper planning of occupational therapy is a big step in establishing a state of happiness in the life of a cardiac patient, be he badly crippled or not.

There are three other points that can be quickly considered. First, most cardiac patients do not need occupational therapy. They are not crippled enough to change their present occupations, be these occupations educational activities of childhood and youth, or vocations of adult life. They may be perfectly content and happy as they are, and may be utterly miserable by being advised to change their jobs. They are often in need to be told to carry on and to be reassured, with a little directing here and there.

Next, it is absolutely imperative to consider and to treat with occupational therapy every single case on its own merits. We can fix no rules. An intelligent and thoughtful physician and an intelligent and thoughtful patient can usually work the problem out together with complete success, but often, especially in the case of children, or unintelligent patients, or hurried physicians, the help of the specialist in occupational therapy is needed.

Finally, the need of occupational therapy for many cardiac patients is great, much neglected, and often wholly unrecognized by both physician and patient. There is here a large opportunity for development and I am grateful for your invitation to exchange our views on this important subject.

A NEW INSTRUMENT FOR INTESTINAL ANASTOMOSIS

BY EDWARD L. YOUNG, JR., M.D.*

VARIOUS methods of intestinal resection having for their object an aseptic technique have been described. One in particular has been used for several years and consists essentially of reuniting the bowel by suturing the ends together in such a way as to make a tight joint where the bowel wall is invaginated over the blades of the clamps: the clamps being removed through the small opening left at the top. I do not know who has the credit of first publishing this method. Ever since I first saw it described, I have used it as a method of choice and I have found it more than satisfactory. It seemed to me that the great drawback was the fact that the two clamps holding the ends of the bowel might allow for leakage and peritonitis. I tried to find some instrument on the market to obviate this difficulty and was unable to do so. With the help of Mr. Rauh at the Massachusetts General Hospital and later Codman and Shurtleff, I devised the following instrument about two years ago. (Fig. A.) This has been so successful since, not only in my hands but in the hands of several of my friends, that I am sending a description of the instrument in the hope that others may find it helpful. It is useful in both small and large intestinal resections and also in end to side anastomoses of small to large bowel. The instrument consists of a double clamp which, when separate, is placed on the two parts of the bowel that are later to be reunited. The blades are long enough to handle large bowel of any dimension that I have yet encountered. They have terminal teeth so that when placed accurately just at the edge of the bowel, the gut cannot slip. The jaws meet at once through the whole length so that when separated to withdraw, they need to be opened only a small distance. They are placed absolutely parallel and ground down on the inner side so that they are as small as is consistent with safety. The lock is one that is quickly set tight and allows no play in any direction. Consequently the bowel is held in exact apposition without difficulty. After the separate halves

FIG. A.

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of this clamp have been placed on the bowel at the spot most suitable for reuniting, any heavy clamp can be used next to it and the gut resected with cautery. (Fig. 1.) The two parts

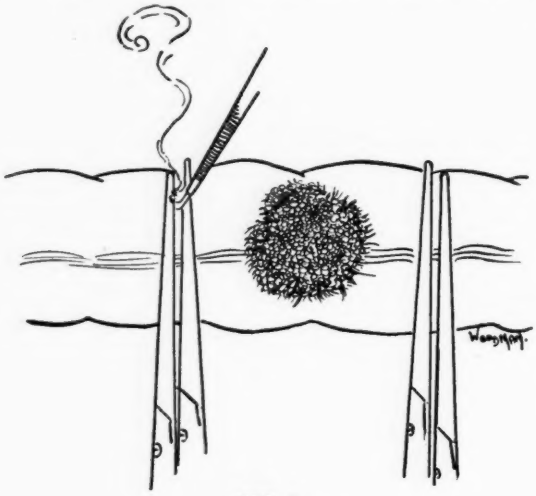

FIG. 1.

of the clamp are then brought together and locked. (Fig. 2.) A mattress suture is then

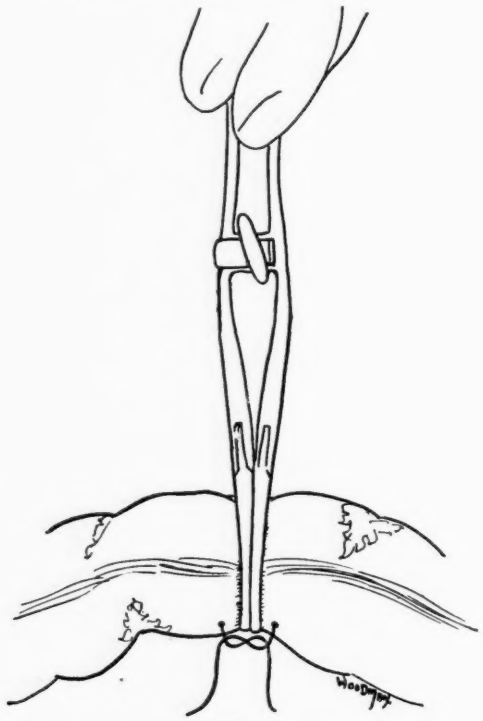

FIG. 2.

placed on the mesenteric border bringing the gut together over the tips of the instrument. (Figs. 2 and 3.) A running suture is then started on one side of the gut invaginating the wall over the blades going well up to the top on one side. A similar stitch is then done on the other side ending on the opposite part of the bowel. (Fig. 4.) Without unlocking the instrument, the blades are then separated enough to allow the instrument to be slipped out of the opening left at the top of the double suture line and the loose ends of suture are tied over the opening. Reënforcing stitches are then used wherever it

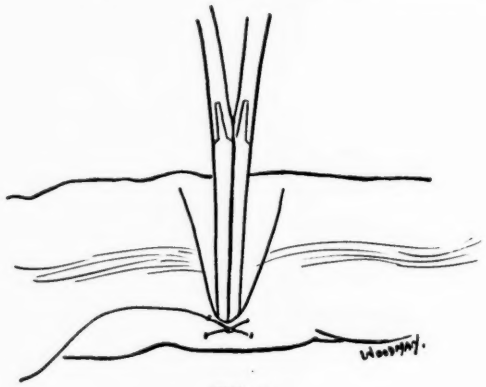

FIG. 3.

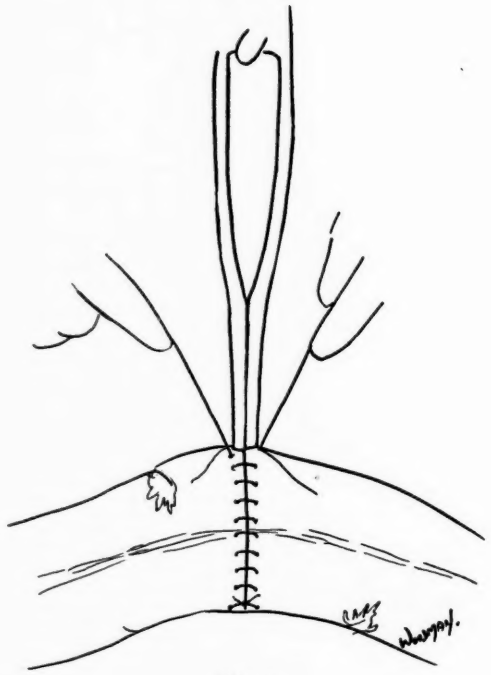

FIG. 4.

seems necessary or expedient. Following this, the crushed end of the bowel, which has remained tight inside the suture line, is broken open by thumb and finger as in Figure 5.

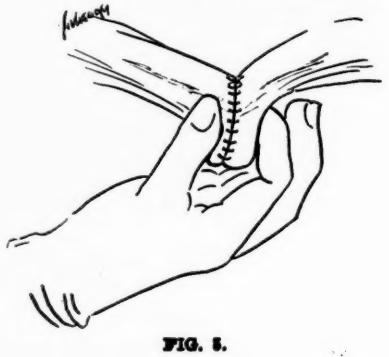

FIG. 5.

The description of the suturing is, of course, a reiteration of what has been described before. The instrument adds to the safety and speed of this operation by holding the gut in accurate and firm apposition while it is being done.

I want to add one other bit of technique which I have found very useful in doing a cecostomy. In many cases this has to be done during a period of obstruction and, as all surgeons know, it is sometimes very difficult to get a tube into an opening in the cecum without spilling contents. If a large rubber tube is clamped from the inside as in the following illustration, it accomplishes two things: a stiff end is given to put into the opening in the gut and the smallest possible opening is necessary for the tube to be used. The instant it slips into the bowel,

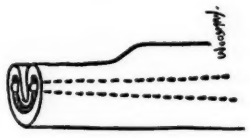

FIG. 6.

the clamp is unlocked and the tube springs at once to the full size and instantly occludes the opening. It is a very simple manoeuvre, but one that I have found most helpful.

JUNIOR LEAGUE OF NEW YORK CITY DISCLOSES WAY TO SPEED RECOVERY OF CONVALESCENT CHILDREN AT REDUCED COST

A new way to bring convalescent children back to health and strength when for any reason they should not return to their own homes, was disclosed in New York recently by May F. Heroy, chairman of the Speedwell Society, an organization sponsored by members of the Junior League. The plan is not only cheaper but more successful than institutional care, she stated.

The method is new in the sense that it was announced to the general public for the first time recently. But it has been in operation for thirty years, during which time sufficient experience has been gained to justify adoption of the plan by other Junior League groups, or any group interested in the health of children, according to Mrs. Heroy.

"We place these little patients in carefully selected foster-homes, usually in the country," said Mrs. Heroy. "The foster mother is paid from $5 to $7 per week by the organization. Besides this, a quart of milk is supplied daily, and a nurse who is a member of the staff visits the home every day to see that everything is progressing well, while a part-time physician is constantly on call. The average cost of operation in 1931, when 1,461 cases were handled in nine units, was $1.61 per child per day. This contrasts sharply with institutional care, averaging $2.25 per day.

"Placing a child directly from a hospital has always been a serious problem," Mrs. Heroy added. "When he is well enough to leave, provided he could get proper care at home, often something has happened to make it undesirable for the child to go home. In these cases, which occur frequently, the little patient must remain in the hospital until fully well, which means little opportunity for play, no companionship with other children, and a retarded recovery.

"To enumerate the ailments from which the little wards of Speedwell are convalescent," states Mrs. Heroy in her article, "is to call the roster of children's diseases; most frequent perhaps are pneumonia, bronchitis, asthma, hilum tuberculosis, heart trouble, and poor nutrition. Communicable diseases are not refused, but are taken by special units during the post-contagious period. Many children have had measles, mumps, chicken pox, infantile paralysis, and meningitis. These, as well as those recuperating from operations for hernia or appendicitis, derive great benefit under the Speedwell plan.

"Children are selected by social service departments of forty-one hospitals, taking into consideration the need of the little patients, as well as home conditions. Sometimes parents are unable to give proper care; there may be insufficient income to permit the right diet; the mother may be working, and unable to devote to the child the time needed to make the best recovery; or conditions at home may be crowded, with insufficient fresh air and sunshine.

"Other advantages are that the Speedwell plan is a welfare project without overhead. Funds disbursed go directly and exclusively for maintenance, care and medical and nursing attention. Special diets may be given without additional cost because the food is cooked in small quantities. Then, too, the cost of building a modern convalescent home is $3,000 per bed; while the Speedwell plan requires no special buildings.

"The originator of the Speedwell plan is Dr. Henry Dwight Chapin of New York. Recently he said: 'The society feels abundantly repaid for effects which fill a need recognized by physicians and nurses working in institutions.' "

MORTALITY RATES

Telegraphic returns from 85 cities with a total population of 37,000,000 for the week ended April 16, indicate a mortality rate of 12 as against a rate of 12.9 for the corresponding week of last year. The highest rate (22.4) appears for Utica, N. Y., and the lowest (4.5) for Akron, Ohio. The highest infant mortality rate (10.7) appears for Spokane, Wash., and the lowest for Grand Rapids, Mich., Knoxville, Tenn., Long Beach, Calif., Lynn, Mass., Omaha, Neb., and Tampa, Fla., which reported no infant mortality.

The annual rate for 85 cities is 12.6 for the 15 weeks of 1932, as against a rate of 13.9 for the corresponding period of the previous year.

VERMONT STATE MEDICAL SOCIETY

SOME SURGICAL ASPECTS OF HEPATIC CIRRHOSIS AND OF SPLENOMEGALY*

BY A. T. BAZIN, M.D.,† MONTREAL

THE first paper of this symposium having set the pace, as it were, with a symptom complex rather than with a recognized entity, I confess to a considerable degree of confusion in deciding how to attack the subject of "Surgical Aspects."

With your permission therefore I will browse about, and, drawing largely from my own experience, will present for your consideration topics which have the interest of surgical application and which are more or less cognate to the conditions under discussion—viz., Hepatic and Splenic Enlargement.

HEPATIC CIRRHOSIS

The pathologic changes of fibrosis and cicatrization will sooner or later result in intrahepatic capillary obstruction—portal, or biliary, or both.

Portal obstruction may be evidenced by ascites, hemorrhage from the intestinal tract, and varicosities of the tributaries of the portal system of veins.

Ascites—a transudation of serum from the over-distended veins of the portal system must not be confused with the exudate resulting from peritoneal irritation whether from widespread infection (tuberculous peritonitis), carcinomatosis, or inflammatory lesion localized to an abdominal organ.

Ascites causes discomfort from weight, distention of the abdominal walls, upward pressure against the diaphragm, etc., and calls for relief, the simplest plan being *paracentesis.*

There is still some difference of opinion as to the technique of this simple procedure. Some prefer puncture in the midline, others well to the side. My own opinion is that the condition of the abdominal wall determines the choice of site. The two accidents to be avoided are a leaking puncture with the danger of infection, and hematoma from wounding of a vessel in the parietes. Given a wall of moderate thickness the midline is preferable, but when the wall is greatly thinned by prolonged distention a puncture at this site is almost invariably followed by leakage. In such cases it is wise to go well laterally in order to obtain the defence against leak of the muscular layers of the wall, avoiding the lines of the deep epigastric and deep circumflex iliac arteries.

Needless to say a trocar and cannula should be used rather than a sharp-pointed aspirating needle—and the preliminary puncture of the skin with a Graefe knife will avoid a point of slough.

The fluid should be allowed to escape very slowly in order to avoid the calamities of "recoil". The profession has been rather slow in appreciating the cell damage which results from the sudden reduction of an abnormal, though partially compensated, high positive pressure—and still more slow in appreciating that the extreme high pressure is suddenly reduced by the withdrawal of the first few cubic centimeters.

To cite a familiar example—A man with stricture urethrae may temporarily relieve intense suffering from over-distended bladder by the passage of but a few drops of urine.

The cell damage of "recoil" is well illustrated in the edema of lungs following too rapid evacuation of a pleural effusion, in hemorrhage into the bladder—or anuria—resulting from catheterization of a distended urinary bladder.

With these easily demonstrable instances, it is logical to assume that in all conditions of high tension, the "calamities of recoil" will follow upon hasty reduction of pressure.

Repeated puncture will be followed by the permanent disappearance of the ascites.

Not because of any inherent virtue in the paracentesis but because time has permitted of the establishing of adequate collateral channels between the portal and systemic venous systems, congestion of the veins of the portal system no longer exists. (We will return later to a consideration of these collateral channels.)

Where repeated puncture becomes irksome, where the lapse of time does not seem to promise the establishment of adequate collateral channels, operative measures may be invoked with benefit.

These consist of some modification of the Talma-Morrison Omentopexy.

It is hard to evaluate the results of these operations and therefore difficult to decide upon which given case should be submitted to operation.

The purpose of the operation is to establish an adequate collateral channel between the portal and systemic venous circulations, therefore the portion of omentum should be brought into relation with that layer of the abdominal wall

*Read at the Annual Meeting of the Vermont State Medical Society, at Rutland, Vt., October 9, 1931.

†Bazin—Professor of Surgery, McGill University. For record and address of author see "This Week's Issue," page 962.

which is abundantly rich in blood vessels, viz., the extraperitoneal and muscular layers. Simply to scarify the peritoneal surface and stitch omentum over that site is a waste of time.

It cannot be expected that the collateral channels will be established immediately, therefore postoperative paracentesis is demanded. To obviate this the Patterson buttons may be used. (*Lancet.* Oct. 29, 1910.)

It is but right to emphasize that the permanent relief of ascites is by the establishment of an adequate collateral circulation by which the blood of the portal venous system passes to the systemic venous system with a detour around the cirrhotic liver.

The easily demonstrable sites of gross communication are

1. Lower end of esophagus—esophageal varix.
2. Lower end of anal canal—Hemorrhoids.
3. Umbilicus—Caput medusae.

Less gross—but quite effective—communications are noted in the dilated veins of the abdominal wall, some proceeding upward toward the axillae and others proceeding downward toward the groins. These compensating varicosities may give rise to troublesome or even dangerous manifestations.

Hemorrhage from esophageal varices may be not only alarming but may even threaten life. Esophageal varices are not necessarily indicative of portal obstruction. They may and do frequently exist in association with any form of splenomegaly. The enlarged spleen demands an increased blood supply and for the return of that increased blood flow there must be a compensating dilatation of the veins in the neighbourhood, including the veins of the lower esophagus.

As somewhat of a digression, permit me to spend a few moments in consideration of the treatment of violent hematemesis.

With the patient in collapse because of the large amount of blood loss it is not permissible to make a routine examination, and therefore it is at times impossible to diagnose definitely the nature of the lesion giving rise to the bleeding. Moreover, although an individual may survive a tremendous initial blood loss, a repeated and much smaller bleeding will result in death. Therefore active resuscitation methods must be avoided. In other words, the treatment indicated is to maintain the patient just alive and no more. It is necessary to attempt to visualize the lesion which may be present.

Over 80% of hematemesis results from a chronic peptic ulcer, but severe bleeding may arise from an acute gastric ulcer, from septic or aseptic thrombosis of the stomach veins, from follicular gastritis or duodenitis, from diverticulum of the duodenum, or from benign or malignant tumour of the stomach. It may also arise from varices in the stomach wall or esophagus because of portal obstruction, or in any form of splenomegaly, and again may be due to blood dyscrasias as in the purpuras, primary anemias and leukemias.

With such a varied etiology it is apparent that treatment can be based only upon the symptom of bleeding and the acute anemia arising therefrom, with every precaution to avoid prompt resuscitation, elevation of blood pressure, with blowing out of a soft ill-formed clot and renewal of bleeding.

Routine treatment should be—

1. Elevation of the foot of the bed 14 inches. Small pillow beneath head, not under shoulders.
2. Morphia in small repeated doses to restrain restlessness.
3. Nothing by mouth, not even cracked ice. Rinsing and swabbing permissible.
4. No stimulation either by drugs or fluid, unless death be imminent as indicated by falling blood pressure, air hunger, etc.
5. Increase of the coagulability of the blood by injection of hemostatic serum or small blood transfusion (200 c.c. or less).
6. Measure of the urinary output as a guide to the administration of fluid by hypodermoclysis (axillary areolar space, submammary space), rarely by rectum, and still more rarely by intravenous route.
7. Absolutely no physical or other examination until the threat of death from recurring hemorrhage has passed, blood pressure estimation excepted.

Under the above plan of treatment all *venous* bleeding will cease. All bleeding from *superficial* ulcers will cease, and recurring hemorrhage indicates that the source of the bleeding is from a chronic penetrating peptic ulcer with, in all probability, a flute hole opening in an arterial vessel.

Such a lesion will not permanently cease bleeding except by surgical control—and desperate measures must be taken.

We will now hasten to the consideration of Splenomegaly.

There are three usual types in which surgery scores brilliant success. Splenic anemia (Banti's disease)—thrombocytopenic purpura — hemolytic jaundice. To these three may be added the chronic malarial spleen, seldom seen in these latitudes, tuberculosis of the spleen, syphilis of spleen not responding to treatment, abscess, tumour and cysts.

The results of splenectomy in pernicious anemia and leukemia have led to the abandonment of the procedure.

Banti's disease is characterized by splenic enlargement, a secondary anemia with leucopenia, and recurring hemorrhage confined to the gastrointestinal tract. The anemia is present in

the absence of hemorrhage; the leucopenia is largely at the expense of the polymorphonuclear cells with relative preponderance of the mononuclears.

The hemorrhage from stomach and intestine is not due to portal obstruction but to compensatory varicosities of the veins of the stomach and esophagus and of those of the splenic flexure of the colon.

All are in accord that splenectomy is indicated in the early stage of the disease before liver enlargement is present. The duration of this stage may be many years. All are agreed that splenectomy will afford a large degree of relief even if hepatic enlargement be present but without portal obstruction.

The duration of this stage is short—a few months.

It is a debatable question whether splenectomy is of any value when the liver is enlarged and ascites is present. The operative risk is high, and the end results not uniformly satisfactory.

But a few reported cases have justified the operation, especially in view of the hopeless prognosis in the untreated case. In this stage of the disease an omentopexy should be done upon concluding the operation of splenectomy.

There are a few technical points which will bear emphasis.

First, the operative risk is dependent upon the relative degree of perisplenitic adhesions.

These bands all carry thin-walled veins which bleed furiously when torn. Adhesions which can be exposed can be easily dealt with by doubly ligating before section, but those passing between spleen and dome of diaphragm are not amenable to such control.

It is no disgrace to decline the completion of the operation when, after opening the abdomen, exploration reveals densely matted adhesions between spleen and diaphragm.

If the operation is to be completed, all exposed adhesions are first divided, especially those about the lower pole of the spleen, then boldly and rapidly the remaining adhesions are torn through, the spleen delivered and hot towels packed against the diaphragm. A donor should always be available in case of need.

THROMBOCYTOPENIC PURPURA

Characterized by repeated spontaneous bleedings from any mucous membrane—nose, gums, stomach, intestine, uterus, kidney,—by ecchymotic patches beneath the skin following upon the slightest pressure or trauma,—a moderately enlarged spleen.

The chief point I wish to make is that these cases are frequently overlooked because the condition is not borne in mind, the recurring bleedings being ascribed to a local cause and treated accordingly.

In my small series I had one young woman whose menorrhagia and metrorrhagia were so severe as to require repeated transfusions. Her uterus was removed by a noted gynecologist. Ecchymotic patches were ascribed to ordinary bruising. Another young woman had been treated during two years for menorrhagia—in spite of nosebleeds and recurring bleeding from the gums.

Suspicion should be aroused by recurring bleedings or by excessive menstruation—by the history of easy bruising—and simple tests may be carried out by anyone. A moderately enlarged spleen is usually found, with the Hess capillary test confirmatory but not diagnostic. The bleeding time is prolonged—sometimes indefinitely.

(Pinprick—wipe off with tissue paper every 15 seconds. Normal time three minutes.) If much prolonged it is practically diagnostic. The clotting time is not delayed but the clot does not retract.

These simple tests, confirming the suspicions aroused by history, warrant the assistance of a skilled hematologist, or technician, for platelet counting, the normal platelet count being 250,000 per c.mm.

In thrombocytopenic purpura the platelets drop to very low levels, at times below 1,000 per c.mm. Below the level of 60,000 per c.mm. spontaneous bleeding may occur.

The treatment is splenectomy, but operation should be avoided during the exacerbation. Moreover one must recognize the acute fulminating type which has sudden onset with fever, universal and continuous bleeding, almost if not entire absence of platelets, and a rapidly fatal issue. In this type transfusion is of no avail and splenectomy must be done as a desperate last resort.

In the usual type preoperative transfusion is of value only to combat the anemia from loss of blood. Transfusion does not raise the platelet count for more than a few hours, although after operation transfusion is most valuable.

Frequent platelet counts should be made and in severe cases transfusion should be repeated as often as required until the platelets have risen above the 60,000 per c.mm. mark.

The operation is not difficult as there are no adhesions or practically none, but the greatest care should be exercised in catching and ligating the smallest bleeding points in the incision, and the greatest gentleness in handling the stomach and intestine. Enormous and alarming subperitoneal ecchymosis will ensue upon rough grasping of the intestine or excessive pressure of a retractor.

Mention must be made of a procedure adopted by Lemaire and Van Goidenshoven of Louvain. In eleven cases, two acute, nine chronic, they ligated the splenic artery in continuity. There was but one death in the series (an acute case)

whereas the operative deaths from splenectomy were 11%.

The ligation of the splenic artery results in slow atrophy of the spleen with exactly similar effects upon cessation of bleeding and rise in platelet count as has splenectomy.

Care must be taken to avoid mistaking aplastic anemia for essential purpura. In aplastic anemia not only is the platelet count low but there is reduction in all the blood elements. In essential purpura the red cell count is low only as a result of bleeding and there is every evidence of active hematogenic function. In aplastic anemia splenectomy is of no avail, in fact an operative death is the usual result.

HEMOLYTIC JAUNDICE

This is a field full of pitfalls for the unwary. A chronic disease of long duration characterized by a slight jaundice, anemia and an enlarged spleen, it is subject to acute exacerbations of increased hemolysis with high fever, delirium, rapidly increasing anemia, lemon jaundice, rapid breathing, cyanosis, and possibly death, with the mistaken diagnosis of pneumonia or influenza.

The surgical pitfall in these cases, however, is due to the associated gall stones. Because of the hemolysis there is an abundance of concentrated bile, and pigment gall stones form in over 80% of cases of hemolytic jaundice. There is no associated cholecystitis, but the stone may give rise to colic or common duct obstruction with the specific symptoms of these accidents assuming prominence and befogging the diagnosis.

The long history of jaundice of mild but persistent degree, the comparative youth of the patient and the easily palpable spleen will prompt an examination of the blood.

Here will be found—

1. Marked increase in bilirubin.
2. Anemia of varying degree.
3. Marked increase in the reticulated red blood cells, which indicates a very active blood forming marrow. Normal .5%—rises to 15 to 50%.
4. Marked increase in fragility.
5. No bile in the urine to be revealed by the ordinary tests but a tremendous increase in urobilinogen.

The treatment of hemolytic jaundice is—

1. During an exacerbation—repeated transfusion for the anemia.
2. In the interval—splenectomy.

The splenectomy is easy—adhesions are not a feature—and hemorrhage is insignificant.

In the associated condition of gall stones there may be the temptation to deal with these at the same sitting, but this is not wise. These cases do not invariably do well. Postoperative shock and persistent vomiting occur out of all proportion, as compared with many other abdominal operations.

The surgeon should therefore be satisfied with the splenectomy and only after an interval of some months should the gall stones be attacked. This is the one instance where a perfectly healthy gall bladder is coincident with the presence of gall stones, and the gall bladder may be left in situ.

FEVER IN ITS THERAPEUTIC ASPECTS

A report to the New York Physical Therapy Society at the New York Academy of Medicine by Dr. William Bierman of New York indicates that the likelihood of the employment of high body temperatures in dealing with certain forms of disease investigations made by Dr. Bierman seems to indicate that in addition to helping cases of arthritis, the artificial fever treatment will prove beneficial in paresis, tabes, multiple sclerosis, Raynaud's disease and various skin disorders. High temperatures brought about by radiothermy may be maintained for indefinite times as may be required to meet the indications of antagonisms to certain infections.

A GRANT TO THE NEUROLOGICAL INSTITUTE CONNECTED WITH McGILL UNIVERSITY

The reputation of McGill University for administrative efficiency and the coöperative spirit of the citizens of Montreal have apparently been determining factors in the award of munificent support for the Neurological Institute by The Rockefeller Foundation.

Added to this, the standing of Dr. Wilder G. Penfield, head of the Institute, has undoubtedly influenced the decision. Dr. Penfield was born in the State of Washington, acquired his education to a great extent in the United States and has achieved distinction in brain surgery. Under his direction important contributions to neurology and neurosurgery are eminently probable.

METHODS OF WATER PURIFICATION

Although most of the large cities of this country have well-developed and wholesome water supplies, smaller places frequently have to depend upon purification in order to insure a healthful product. The ideal method comprises four separate processes which consist of chemical coagulation by the use of aluminum or iron sulphate, then sedimentation followed by filtration through sand and finally disinfection of the water by chlorine. These four processes are in vogue in places throughout the South especially, and might with advantage be applied in those communities where well-developed water supplies above suspicion are not available. Objection has often been made to the taste of chlorine which is a powerful disinfectant but the fact remains that the amount is so small that one may not be conscious of its presence except on occasions when it may have been a little more concentrated. At any rate, these processes have been found to insure a wholesome water supply.

THE NEW HAMPSHIRE MEDICAL SOCIETY

THE ONE HUNDRED AND FORTY-FIRST ANNUAL MEETING

Hotel Carpenter, Manchester, N. H.

Tuesday and Wednesday, May 17-18, 1932

THE first meeting of the House of Delegates will be held Monday evening, May 16, at 7:30 o'clock, Hotel Carpenter, and subsequent meetings will be in the same place.

The Scientific Sessions will open promptly at 10:00 o'clock A. M., Tuesday, with General Meetings forenoon and afternoon, Tuesday and Wednesday.

Wednesday evening, May 18, Banquet 6:30 o'clock, Hotel Carpenter. Tickets—$2.00 each.

All meetings will be called to order promptly at the stated hour—Standard Time.

Officers

President

George C. Wilkins, Manchester.

Vice-President

Harry O. Chesley, Dover.

Secretary-Treasurer

D. E. Sullivan, Concord.

Councilors

	Term Expires
Richard W. Wilder, Coos County	1932
F. E. Clow, Carroll County	1932
Clifton S. Abbott, Belknap County	1933
Arthur T. Downing, Grafton County	1933
A. A. Pratte, Cheshire County	1934
Emery M. Fitch, Sullivan County	1934
Henry H. Amsden, Merrimack County	1935
Clarence O. Coburn, Hillsborough Co.	1935
Abram W. Mitchell, Rockingham Co.	1936
John A. Hunter, Strafford County	1936

Trustees

Alpha H. Harriman, Laconia	1932
Ira J. Prouty, Keene	1933
Thomas W. Luce, Portsmouth	1934

House of Delegates

The President, ex-officio.
The Vice-President, ex-officio.
The Secretary-Treasurer, ex-officio.

Rockingham County

Ralph Barker, Derry.
John G. W. Knowlton, Exeter.
Fred Fernald, Nottingham.

Merrimack County

Charles H. Parsons, Concord.
Arthur B. Howard, Concord.
George M. Crowell, Suncook.

Cheshire County

George L. Emerson, Fitzwilliam.
Frank Dinsmoor, Keene.

Grafton County

R. G. Perry, Wells River, Vt.
F. P. Lord, Hanover.
Kenneth Churchill, Lebanon.

Sullivan County

Charles F. Keeley, Claremont.
Henry C. Sanders, Jr., Claremont.

Hillsborough County

D. G. Smith, Nashua.
P. Bergeron, Manchester.
T. F. Rock, Nashua.
Henry H. Dearborn, Milford.
D. W. Parker, Manchester.

Belknap County

Park R. Hoyt, Laconia.
Richard W. Robinson, Laconia.

Carroll County

Charles C. Smith, Conway.
Paul Dye, Wolfeboro.

Strafford County

Thomas J. Morrison, Somersworth.
D. L. Stokes, Rochester.

Coos County

J. A. Ferguson, Lancaster.
A. C. Johnston, Gorham.

HOUSE OF DELEGATES

Monday, May 16, 7:30 P. M.

Hotel Carpenter

Speaker, Frederic P. Lord, Hanover.
Vice-Speaker, Eugene B. Eastman, Portsmouth.

Order of Business

Subject to Approval of the House

Roll Call.
Minutes of last meeting.

Appointment of Committees.
Reports of Officers.
Reports of Standing and Special Committees.
New Business.
Report of Committee on Nominations. (First business of second day.)
Election of Officers.
New Business.
Unfinished Business.

Announcements

Note carefully the program.

Every member is requested to register and receive a badge before entering the General Assembly Hall. Ample provisions will be made for these purposes. Please present your membership certificate when registering.

As heretofore, the usual exhibition of x-ray apparatus, books, surgical appliances, drugs and foods will be held. Application for space should be made to Dr. George F. Dwinell, Manchester.

Ladies of visiting members are cordially invited to visit Manchester during the state meeting and are urged to attend the banquet Wednesday evening.

Members of the resident Ladies Committee will be in attendance at headquarters to render such services as may be desired by the visiting ladies.

During the discussion of papers, the speakers will please announce their names plainly for the benefit of the stenographer, and then walk forward to the platform so that the audience and the stenographer may plainly hear what is said.

All meetings will be called to order promptly at the hour stated, S. T.

Discussion of papers is open to all members and guests of the Society. It is not limited to those named on the program.

GENERAL MEETING

Tuesday, May 17, 10 A. M.

Standard Time

Call to order by the President, George C. Wilkins.

Invocation. Rev. Alphè Leclair.

Address of Welcome, The Mayor, Damase Caron, M.D.

Report of Committee on Arrangements, Joseph E. Larochelle.

Introduction of Visiting Delegates.

Introduction of members in practice fifty years, 1882-1932.

The Conduct of Normal Labor. Benjamin P. Burpee, Manchester.

Discussion opened by: Donald G. McIvor, Concord; Chester F. McGill, Portsmouth.

Appendicitis. James B. Woodman, Franklin.

Discussion opened by: Alexander A. Beaton, Franklin; John F. Gile, Hanover.

Tuesday, May 17, 2 P. M.

Standard Time

The President's Address, George C. Wilkins, Manchester.

Postmortem Lethargy. Carleton R. Metcalf, Concord.

Discussion opened by: Howard N. Kingsford, Hanover; David W. Parker, Manchester.

Inversion of the Uterus: With Report of an Unusual Case. Emery M. Fitch, Claremont.

Discussion opened by: Robert H. Brooks, Claremont; Charles F. Keeley, Claremont.

Anorexia Nervosa with Report of Cases. (Lantern slides.) Fred E. Clow, Wolfeboro.

Discussion opened by: Harry T. French, Hanover; Robert O. Blood, Concord.

Tuesday Evening, 7:30 P. M.

Standard Time

Public meeting.

Illustrated talk. Patent Medicines. Arthur J. Cramp, M.D., Chicago, Ill., Director Bureau of Investigation, A. M. A.

"Legend of Gosport Town." William Hale, M.D., Gloucester, Mass.

The illustrated talk is of great educational value to the public, and a cordial invitation to attend is extended to all.

Wednesday, May 18, 10 A. M.

Standard Time

Some Pathological Problems. Albert C. Johnston, Gorham.

Discussion opened by: Joseph J. Cobb, Berlin; Osmon H. Hubbard, Keene.

Diagnosis of Early Pulmonary Tuberculosis. Byrl R. Kirklin, Mayo Clinic, Assistant Prof. Radiology.

Discussion opened by: Fred S. Eveleth, Concord; Robert M. Deming, Glencliff.

The Attenuation of Measles. Charles C. Stewart, Hanover.

Discussion opened by: Clarence H. Sanford, Exeter; Frank N. Rogers, Manchester.

Motion Picture with Sound. Repair of Second and Third Degree Lacerations of the Perineum and Rectocele.

Wednesday, May 18, 2 P. M.

Standard Time

Presentation of 50-year Membership Gold Medal to George W. Weymouth, Lyme.

Symposium on Cancer

Radiation in Operable Cancer. Douglas Quick, Surgeon to Memorial Hospital, New York City.

Responsibility of the Medical Men in the Control of Cancer. Burton T. Simpson, Director of the New York State Institute for the Study of Malignant Disease, Buffalo, N. Y.

Discussion opened by: Ernest M. Daland, Boston; James W. Jameson, Concord.

Report of House of Delegates.

Report of Trustees.

Installation of Officers.

WEDNESDAY EVENING, 6:30 P. M.

Standard Time

BANQUET

Dr. Carleton R. Metcalf, Concord, Anniversary Chairman.

Speakers:

Gov. John G. Winant, Concord.
Dr. George C. Wilkins, Manchester, President New Hampshire Medical Society.
Dr. Douglas Quick, New York City.
Hon. George H. Moses, Concord.
Dr. George B. Magrath, Boston.

Concord Orchestral Club.

STANDING COMMITTEES

Scientific Work

D. E. Sullivan, Richard W. Robinson, Frederick P. Scribner.

Public Relations, Public Policy and Legislation

Samuel T. Ladd, James W. Jameson, H. O. Smith, the President, the Secretary-Treasurer.

Publication

D. E. Sullivan, Henry H. Amsden, Raymond H. Marcotte.

Tuberculosis

Robert B. Kerr, R. W. Deming, A. L. Wallace.

Mental and Social Hygiene

Benjamin W. Baker, Charles H. Dolloff, H. W. N. Bennett.

Control of Cancer

Fred E. Clow, George C. Wilkins, Howard N. Kingsford.

Lay Health Organizations

Eugene B. Eastman, Robert B. Kerr, E. A. Jones, Emery M. Fitch, Carleton R. Metcalf.

Medical Education and Hospitals

John P. Bowler, term expires 1932; Joseph J. Cobb, term expires 1933; Robert J. Graves, term expires 1934.

Medical Defense

Thomas W. Luce, Rockingham County; Robert J. Graves, Merrimack County; Osmon H. Hubbard, Cheshire County; Arthur T. Downing, Grafton County; Henry C. Sanders, Jr., Sullivan County; David W. Parker, Hillsborough County; Clifton S. Abbott, Belknap County; Louis W. Flanders, Strafford County; Joseph J. Cobb, Coos County; D. E. Sullivan, Concord, Chairman.

Amendments to Constitution and By-Laws

Henry O. Smith, Fred E. Clow, Thomas W. Luce.

New England Medical Council

George C. Wilkins, President; D. E. Sullivan, Secretary-Treasurer; Thomas W. Luce, term expires 1932; David W. Parker, term expires 1933; Frederic P. Lord, term expires 1934.

Delegate A. M. A.

D. E. Sullivan, 1932-1933.

Alternate Delegate A. M. A.

Deering G. Smith, 1932-1933.

COMMITTEE ON ARRANGEMENTS

General Chairman, J. E. Larochelle.

SUB-COMMITTEES

Location—David W. Parker.
Program—W. A. Thompson.
Reception—D. C. Norton.
Banquet and Entertainment—W. A. Bartlett.
Exhibition—George W. Dwinell.
Finance—John Deitch.
Publicity—John F. Holmes.

List of Commercial Exhibitors at the time of going to press:

Elmer N. Blackwell.
Boss & Seifert Company.
Campbell Electric Manufacturing Co.
The Chelmsford Ginger Ale Co., Inc.
Davies, Rose & Co., Ltd.
George C. Frye Co.
General Electric X-Ray Corp.
General Ice Cream Co.
Hartford Accident & Indemnity Co.—G. Allen Putnam Agency.
Howard E. Hartman, Inc.—Franklin, Auburn and Cord Motor Cars.
H. P. Hood & Sons.
Lederle Laboratories, Inc.
E. F. Mahady Co.
Mead Johnson & Co.
Mellin's Food Co.
National Drug Co.
The P. J. Noyes Co.
The E. L. Patch Co.

Petrolagar Laboratories.
Pomeroy Company.
Surgeons' and Physicians' Supply Co.
Tailby-Nason Co.

MISCELLANY

VITAL STATISTICS

During 1930 there were 8,363 births, 5,142 marriages and 6,325 deaths, while during 1931 there were 7,775 births, 5,535 marriages and 5,939 deaths. This makes a decrease of 588 births and 386 deaths during the year 1931, while there was an increase of 393 marriages.

The death rate for 1931 is 12.76. This is the lowest death rate for New Hampshire in the forty-eight years for which statistics have been compiled. — *Bulletin, New Hampshire State Board of Health.*

REMOVALS

Dr. Henry Leon Clow has removed from Hathorne, Massachusetts, to East Gardner, Massachusetts.

Dr. Edwin D. Lee has removed from Tilton, N. H., to Lancaster, N. H.

Dr. Arthur G. Holland from Relief Hospital, East Boston, to West Medford, Mass.

Dr. Henry L. Stickney from Sunmount, N. Y., to Newington, Conn.

NEW MEMBERS

Dr. Peter J. Doyle, Dover.
Dr. Bernard Joseph Manning, Dover.
Dr. Edward Gideon Marcotte, Dover.
Dr. Arthur Winford White, Durham.
Dr. Valmore E. Bolduc, 73 West Pearl Street, Nashua.
Dr. Harold I. L. Loverud, 967 Elm Street, Manchester.
Dr. Frank F. Flagg, 92 Main Street, Nashua.
Dr. Phillip B. Weinberg, Whitefield.

DEATH

Dr. Elmer F. Brown, Groveton.

THE COST OF PUBLIC HEALTH SERVICE

Dr. Stanley H. Osborn, Commissioner of Health, State of Connecticut, says in the *United States Daily* that in these times many persons have occasion to ponder the price of public health when they view the total amount of the budget of a department of health and possibly the cost of their own medical care from the doctor, dentist, nurse and hospital. We are not discussing the personal sickness, but rather the health menace that may affect the general public.

We are considering the safeguarding of such matters as water and milk supplies; the prevention of the spread of epidemics of communicable diseases; and the laboratory activities, which are such a necessary part of communicable disease control.

The many phases of public health now include sanitary engineering, vital statistics, preventable diseases, mental hygiene, laboratories, occupational diseases, public health nursing, child hygiene, dental hygiene and nutrition. The work carried on by these activities is reflected, in part, in the low death rates from many diseases.

The cost of the public health protection in the towns and cities varies from approximately 10 cents to 80 cents per capita per year, or less than the average bottle of patent medicine or an evening's entertainment. Some towns pay less, and one or two cities with isolation hospitals have a higher cost.

The cost of the State Department of Health activities is approximately 21 cents per capita. These costs are not excessive when we realize that Connecticut is enjoying a lower death rate than any of the northeastern states at the present time. In many causes of death, such as infant mortality, diphtheria, typhoid fever, deaths of mothers in childbirth, the rates are constantly decreasing. Truly, the judicious expenditure of money in modern public health programs returns added wealth in health each ensuing year.

There is much disease that can still further be eliminated by the present means at our disposal. To put these measures into action would mean a few cents per capita additional each year. As new methods of tackling public health problems arise, often more can be done at a lower cost, and this is one of the means that has enabled public health workers to do so much even though the budget does not show an increase comparable to the added activities.

Where there were thousands of cases of diphtheria and typhoid each year in Connecticut, we now have hundreds. Where we had formerly water-borne epidemics of disease, we have none. Where we had food outbreaks of disease, they are now a rarity.

So to answer the question asked at the beginning of the discussion, "What price public health protection?" we can but say it is, on the yearly average, less than a dollar per person for all health department activities, local and state, in Connecticut.

Further, we can state that much additional sickness is known to be preventable if the general public could see the way to furnish their departments of health with funds.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 18181

ENLARGED CERVICAL GLANDS NOTICED FOR THREE MONTHS

MEDICAL DEPARTMENT

First admission. An Irish-American motorman thirty-five years old entered complaining of swollen glands of three months' duration.

For a year he had had dry hacking unproductive morning cough which had improved in the past three months, since he stopped excessive smoking. Four months before admission he noticed that his collars were very tight and he felt swollen masses over the right side of his neck. For a month these grew slowly larger, then remained unchanged. A dentist removed three infected teeth without effect upon the size of the glands. There had been no change in the patient's general health. He had lost about 10 pounds in the past year. For two months he had had itching over the skin of his neck and legs.

He had gonorrhea twelve years before admission and pneumonia five years before admission. He smoked twenty to thirty cigarettes a day until three months before admission.

The family history is not important.

Clinical examination showed a man with evidence of recent loss of weight. The skin was dry, rough and browned in places. There was marked general enlargement of the glands, with greatly enlarged cervical glands, larger on the right. The tonsils were small, cryptic and injected. The chest showed increased retromanubrial dullness.

The urine was negative. Blood examination showed 11,400 to 7,800 white cells, 84 per cent polynuclears, hemoglobin 70 per cent, 4,920,000 reds, slight achromia. The smear was otherwise normal. Two specimens of sputum showed no tubercle bacilli. A Hinton test was negative.

The temperature was 97.4° to 100°, the pulse 79 to 120. The respirations were normal.

X-ray examination showed marked increase in the width and density of the hilus shadows and the lung markings throughout the chest. The lung markings were especially remarkable in the infraclavicular region, where there was fine mottling. The supracardiac shadow was considerably increased in width. There appeared to be some compression of the trachea at the level of the clavicles. There was fibrosis and a questionable area of consolidation in the right upper lobe. There was enlargement of the hilus glands of the superior mediastinum.

The patient was given x-ray treatment. A month after admission he was discharged.

History of interval. After leaving the hospital the glands practically disappeared with continued x-ray treatment, and the patient became symptom free except for occasional slight productive cough. Six weeks after his discharge he noticed a gland in his left groin. This slowly increased in size until at the time of his second admission, four and a half months after his discharge, it was the size of an olive. It was always slightly tender, the only one of his enlarged glands which was tender. About the same time small glands reappeared in his neck, but remained the size of peas and beans. Three months before readmission the cough became worse and more productive. Ten weeks before readmission he had sharp catching pain in the left axilla, worse on respiration. This lasted only one day, but the patient felt ill and went to bed, where he stayed for six weeks trying to get rid of his "cold". His temperature ranged from 99° to 102°. He raised considerable amounts of sputum. The itching of his legs returned. Four weeks before readmission he noticed dyspnea on exertion.

Second admission, four and a half months after his discharge.

On examination there were enlarged glands in the neck, axilla and groin. There was increased retromanubrial dullness. There were signs of fluid or collapse at the left base. A questionable mass was felt in the epigastrium.

The urine showed rare white cells at three of four sediment examinations. Blood examination showed 6,600 to 3,700 white cells and 80 to 87 per cent polynuclears, hemoglobin 75 per cent, reds 4,200,000, with moderate achromia. Another Hinton test was negative.

The temperature was 97° to 101°, the pulse 71 to 128. The respirations were 16 to 29.

X-ray examination showed marked infiltration at the right apex. The left diaphragm and the apex of the heart were obscured by the high position of the diaphragm and the infiltrated area at the left base. The mediastinum was distinctly abnormal. It was greatly increased in its diameters and its edges were lobulated. The heart, mediastinum and trachea were displaced to the right. There was no evidence of organic disease of the esophagus, stomach or duodenum.

X-ray treatment was begun two days after admission. Eleven days later another chest film showed an old infiltrative lesion of the right lung, thickening of the pleura and a high fixed left diaphragm. The costophrenic angle was obliterated. The entire left lung field was in-

completely aerated, more markedly at its base than at its apex. The heart and trachea were displaced noticeably to the right. The mediastinal shadow was still markedly abnormal.

X-ray treatment was continued for another week. The temperature became practically normal and the patient felt much improved. The day before discharge another film showed that the mass in the mediastinum was smaller and the lung field larger. The diaphragm was normal. At the end of twenty-three days he was discharged.

History of interval. For eight days after his discharge the patient remained about the house feeling pretty weak. Two nights before his third admission he went to bed feeling much better than usual. During the night he was awakened by severe pain in the left side of his chest, much worse on breathing. His physician gave him a hypodermic with some relief. The following day the pain continued in his left chest and the upper part of his abdomen. The buttocks and lower humeri were very sore. He had fever. The day before readmission he vomited. His bowels did not move for three days before readmission.

Third admission, ten days after his last discharge.

On examination he was pale, poorly nourished, in moderate respiratory distress and obviously very sick. There was cyanosis of the lips and fingernails. The skin was dry, with a rectangular area of purplish discoloration over the upper part of the back. The skin was peeling around this area. The trachea deviated slightly to the right. There were bilateral cervical, axillary and inguinal glands; the left inguinal gland was the size of a plum. The right side of the chest moved better than the left. There was cutaneous hyperesthesia on the left. The heart border could not be percussed because of flatness in the left chest. The heart did not appear to be displaced to the right. The action was rapid. The sounds were of poor quality. No murmurs were heard. The left chest front and back showed dullness to flatness with râles, diminished voice sounds and absent tactile fremitus. The front showed diminished bronchial breathing and egophony; the back showed diminished to absent breath sounds and no egophony. There were a few râles at the right apex in front.

Blood examination showed 750 to 1,620 white cells. One differential count showed roughly 20 per cent polynuclears; another showed 72 per cent young polynuclears, 28 per cent large pale lymphocytes. The hemoglobin was 80 per cent. The reds were normal. The platelets were decreased.

The temperature was 100.9° to 104.1°, the pulse 108 to 141. The respirations were 19 to 30.

X-ray examination of the bones of the pelvis showed no definite abnormalities. There was slight mottling over the left acetabulum. The right chest showed very little change. The heart, mediastinum and trachea were still displaced to the right. There was rather dense mottling of the entire right upper lobe. The appearance of the left chest showed marked change. There was now a dense homogeneous shadow occupying the lower three fourths of the left chest. The upper edge of the shadow ran upward in the axillary line to the level of the first rib anteriorly.

The patient was very ill, with tracheal râles. There was marked tenderness in the region of the sacro-iliac joints, also just above the right elbow and in the right calf. The night of admission 2,200 cubic centimeters of thin pus, specific gravity 1.020, containing 16,000 cells was removed from the left chest. The cells were disintegrating and hard to identify. A few polynuclears and lymphocytes were seen. The smear was loaded with Gram-positive cocci in pairs and chains. Culture showed streptococcus hemolyticus.

The following day the patient died.

Clinical Discussion

BY RICHARD C. CABOT, M.D., TRACY B. MALLORY, M.D., AND GEORGE W. HOLMES, M.D.

NOTES ON THE HISTORY

Dr. Cabot: Whether that itching was of any significance we do not know. We naturally remember that Hodgkin's disease, one of the causes of glands in the neck, often causes a great deal of itching.

We are looking for the cause of enlarged glands in the neck in a man of thirty-five. Tuberculosis is not very probable. People do not often begin to have neck glands in tuberculosis at that age. They have them earlier and later; thirty-five is the period in between when they do not often have them. Also his glands never have broken down. Syphilis of course is possible, but we have no other evidence or history of it. Ordinarily people do not get pressure symptoms from syphilitic glands. They are found on physical examination, but they do not often get big enough to give pressure symptoms. Hodgkin's disease or some form of malignant disease, perhaps secondary to a tumor in the chest, is chiefly what we are looking for.

Dr. Mallory: I should like to make a remark there. I should say that close to 20 per cent of enlarged glands in the neck are metastatic adenocarcinoma from some unrecognized focus in the nose or throat. It is astounding what a large number of those cases we see every year. Even after the diagnosis of carcinoma has been made, when we go back to look over the nose and throat again sometimes we still fail to find the primary focus.

DR. CABOT: That is quite new to me. I had thought of them as evidence of disease of the stomach or chest, not in relation to the nose or throat.

DR. MALLORY: We find a large proportion of them to be definitely secondary to a nose, mouth or throat primary lesion. Sometimes the primary is missed simply from clinical oversight. It is astonishing what a large tumor may exist in that region and escape the clinician. I remember one case that was carefully studied by both medical men and laryngologists. The medical men looked from the front and saw nothing. The laryngologists put their mirrors in from behind and saw nothing. There was a cancer as big as a golf ball behind the tongue but hidden from the pharynx by the uvula, so that they could not see it on the mirror. If anybody had put his finger in he would have felt it.

DR. CABOT: Dry, rough skin, browned in places is again often the case with Hodgkin's disease.

DR. HOLMES: The earliest films we have were taken of his chest in August and again in November, two years and half before he died. At that time he had a marked increase in the supracardiac shadow, which has a rather lobulated border and is just dense enough to obscure the great vessels. Beyond it the lungs are increased in density and the dullness seems to extend along the lung markings well out into the periphery of the chest. The heart is not remarkable, and the lower part of the lung fields appears normal. Such a shadow as that usually means enlargement of the peritracheal group of glands. There is a bilateral shadow and the edges are somewhat lobulated. In this film one can see the trachea running through it. The trachea looks as if it were compressed. I am not quite sure of it. I think we have a process here which involves the peritracheal glands and to some extent the surrounding lung, a process which improved definitely in the period between August and October.

DR. CABOT: It improved under treatment?

DR. HOLMES: I hope that was it.

Here we have him again in January and in the spring. The intervals are fairly regular; he improved again and got worse again and again improved. The character of the shadows is changing somewhat. There is definite evidence that the peritracheal group of glands disappeared and we have more evidence of a process in the lung itself. Apparently the glands cleared up under treatment, but the changes in the lungs did not clear up as they should.

This is in the autumn again. The process is beginning to reappear, but now it is in the lung substance more than in the glands.

DR. CABOT: What tells you that last?

DR. HOLMES: The mottled appearance and the ragged edge. If it were confined to the glands it should be sharply lobulated. I think at that time there was some glandular enlargement as well as the process in the lung. Now the pleura has become involved and we have dullness at the base which suggests pleurisy.

DR. CABOT: Is there any pneumothorax there?

DR. HOLMES: No, I think not. This lung would have to be somewhat emphysematous on account of the diminished aeration over the other.

DR. CABOT: Was there a fluid level?

DR. HOLMES: I do not see any other evidence of it. There should be a bright gap above it, which I do not see. The fluid is rapidly increasing. The heart and mediastinal contents are displaced towards the opposite side. I think these are the last films we have of the chest. We have some films of his pelvis and spine. They show nothing very definite. They were evidently looking for involvement of the bone. I do not see any evidence of it.

We also have an examination of his gastrointestinal tract. One never feels free to make an interpretation of the films without a fluoroscopic report. In this film there is a depression in the duodenal bulb, but that may be because the patient was lying in such a way as to produce pressure on it when the film was taken. Otherwise the film is negative. In the very early stages he had changes in the lung which are bilateral and had more the appearance of tuberculosis than of anything else. It is true that Hodgkin's disease in the x-ray film can simulate tuberculosis very closely, especially if the patient has had radiation treatment. It is sometimes impossible to distinguish one from the other. With such an appearance as this I should suspect he had tuberculosis. The enlargement of the peritracheal group of glands is almost evidence enough to warrant a diagnosis of Hodgkin's disease. It occurs in adults in practically nothing else.

DR. CABOT: What is the whole period covered by these films?

DR. HOLMES: About two years and a half.

DR. CABOT: Wouldn't that be too long for any form of malignant disease except Hodgkin's disease?

DR. HOLMES: Yes.

DR. CABOT: As we read on we will try to settle what sort of malignant tumor this is, Hodgkin's or some other.

It was the neck glands I take it that practically disappeared with x-ray treatment.

It is interesting to read the clinical record after seeing all these x-rays. We should not think he could have done so well as that with all that you showed us, Dr. Holmes.

This question of tuberculosis that Dr. Holmes has raised has to be borne in mind after hearing of this long cough and sputum, which might be due to Hodgkin's disease, to the malignant disease itself or to tuberculosis or to both. Of

course they do often go together.

"There were signs of fluid or collapse at the left base." Collapse I take it, Dr. Holmes, can be excluded from what you told us.

DR. HOLMES: He could have had a collapsed lung beneath the fluid.

DR. CABOT: Could it be a combination of both?

DR. HOLMES: Yes.

DR. CABOT: "A questionable mass was felt in the epigastrium." You remember he had some gastro-intestinal x-rays, but they did not show anything.

I do not know what was going on in the interval before the third admission, whether it can all be due to acute pleurisy or whether something else is happening.

The streptococcus hemolyticus may account for the tenderness found in various other parts of the body.

DIFFERENTIAL DIAGNOSIS

Dr. Holmes raised the question of tuberculosis. I do not see that there is any evidence of it. I do not see any report of a sputum examination, but there is no doubt that they examined the sputum. It seems to me we should make a diagnosis of lymphoma, Hodgkin's disease. The evidence of that is in the first place the symptoms he has had, the way this disease has appeared on the outside of the body as well as in the mediastinum, the way it responded to x-ray—very few other kinds of malignant disease respond so well,—the itching and the brownish tint of the skin. I believe he had Hodgkin's disease in his lungs and outside the lungs in the external glands. I do not see that we have evidence that he had anything else. It is conceivable that he also had tuberculosis. At the end he obviously had a streptococcus hemolyticus infection which I suppose was the cause of his death.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Lymphoblastoma.
Empyema.
Streptococcus septicemia.

DR. RICHARD C. CABOT'S DIAGNOSES

Malignant lymphoma, Hodgkin's disease.
Septicemia, streptococcus hemolyticus.

ANATOMIC DIAGNOSES

1. *Primary disease.*

Lymphoblastoma, Hodgkin's type.

2. *Secondary or terminal lesions.*

Septicemia, streptococcus hemolyticus.
Acute pleuritis with effusion.

PATHOLOGIC DISCUSSION

DR. MALLORY: We found a very widespread Hodgkin's disease which was most marked in the peritracheal, peribronchial and retroperitoneal lymph nodes, and also more or less throughout the lungs. Those were filled with little miliary nodules and also a certain number of larger nodules one to even two centimeters in diameter which in gross were somewhat caseous and which we rather thought were tuberculous. On microscopic examination however it was pure Hodgkin's disease. It is perfectly possible for a Hodgkin's node to become as caseous as any tuberculous node.

There was marked pleural effusion on the left, nearly 2,000 cubic centimeters of slightly purulent fluid which showed streptococcus hemolyticus on culture. The Hodgkin's had involved the pleura extensively and also the pericardium, and to some extent had grown as a sort of membrane over most of the liver and spleen without involving the central portions of the organs very much.

DR. HOLMES: Do caseous areas in Hodgkin's ever become calcified?

DR. MALLORY: I do not believe they would do that, Dr. Holmes. It is sometimes quite impossible however to distinguish them in gross from tuberculosis. I have been caught on that repeatedly. In fact in this case we had no doubt that there was tuberculosis; then when the sections came through we found that it was pure Hodgkin's, with no sign of tuberculosis.

CASE 18182

ELEVATION OF BASAL METABOLISM AND TRANSIENT POSITIVE BLOOD CULTURES IN A CASE OF RHEUMATIC HEART DISEASE

MEDICAL DEPARTMENT

PRESENTATION OF CASE

DR. ASHTON GRAYBIEL*: *First admission.* This patient was a young man of twenty-one who entered for the first time at the age of seventeen, about three and a half years before his final entry.

There was no history of rheumatic fever, chorea or tonsillitis. He had suffered from nosebleeds about six times yearly.

Physical examination showed a poorly developed boy in no distress. The abnormal findings were limited to the heart, which was moderately enlarged. There were the characteristic murmurs of mitral stenosis and aortic regurgitation. There was a rheumatic nodule on the left elbow.

*Recently senior interne on the East Medical service.

The temperature, pulse and respirations were not abnormal.

Routine laboratory examinations showed that the white blood count varied from 8,000 to 15,000. An electrocardiogram showed delayed auricular-ventricular conduction, slight slurring of QRS in all leads, somatic tremor.

A diagnosis of subacute and chronic rheumatic heart disease was made. He was treated with salicylates. After three weeks he was discharged considerably improved, with a recommendation to a convalescent home and advice to take a daily ration of digitalis.

History of interval. Following his first admission he led a bed and chair existence for a year. During the following year he did light work and continued an active life until three days before his second entry, at which time he was suddenly seized with rapid palpitation. He was advised to rest and also to resume digitalis, which he had recently become negligent in taking.

Second admission. His second entry was a little over a year before his final entry. Examination showed that the heart was increased in size and the action absolutely irregular. In addition to the characteristic murmurs of mitral stenosis and aortic regurgitation there was a rough systolic murmur and a systolic thrill in the aortic area. The blood pressure was 112/0. The liver was enlarged. The tip of the spleen was palpable. There were recurring crops of petechiae, observed chiefly in the mouth.

The patient ran an intermittent fever of 99° to 101°.

A blood culture showed streptococcus viridans. The urine was negative. There was neither leukocytosis nor anemia.

The patient improved while in the ward.

History of interval. After a month's convalescence he was moderately active again, and was quite well until the last month before his third admission, during which time he complained of epigastric pain, nausea, vomiting, increasing weakness and orthopnea.

Third admission, seven months after his last discharge.

Physical examination showed a sick looking young man with some cyanosis of the lips. The heart had not increased in size since the previous entry. The action of the heart was totally irregular. The murmurs were as before noted. The blood pressure was 145/35. No petechiae were seen, and there was no clubbing of the fingers. The liver and spleen were not felt. There were a few râles at the right base.

All the laboratory work was negative, including the blood cultures. An electrocardiogram showed auricular fibrillation with ectopic ventricular contractions, inverted T waves and intraventricular block.

Sedatives and rest resulted in improvement. The patient was discharged home.

History of interval. Following this discharge he led a convalescent existence, complaining chiefly of dyspnea, palpitation, nervousness, distention, anorexia and sweating. He did fairly well until six weeks before the last entry, when he suffered from severe constricting precordial pain lasting an hour. Shortly after this he was made angry by his sister and had a return of the precordial pain associated with marked dyspnea and palpitation. His aggravated symptoms were not relieved, and he entered for the fourth time.

Fourth admission, four months after his third discharge.

Examination showed a poorly nourished young man with his entire trunk shaking with each heart beat. The skin was warm and moist. The pupils were dilated, and there was a definite start and slight exophthalmos. Small cervical, axillary and inguinal glands were palpable. The heart was markedly enlarged. The action was totally irregular. There was a slight systolic thrill over the aortic area extending into the neck, also a diastolic thrill at the apex. The murmurs were as before. The liver was enlarged. The spleen was not felt. The chest was clear. There was no edema. There was a Corrigan pulse. Pistol shot and Duroziez's sign were noted over the femoral artery. The blood pressure was 160/20.

The temperature by rectum varied from 99° to 100°.

Dr. Means saw the patient, thought that thyrotoxicosis must be considered and believed a therapeutic trial of Lugol's solution desirable. The basal metabolic rate level was found to be about 25. After potassium iodide it dropped somewhat, but varied greatly, ranging from plus 12 to plus 29. There was definite clinical improvement. The thyroid gland became distinctly larger.

The patient's course was uneventful until one afternoon he suddenly developed severe sudden cyanosis and tachycardia without other signs of cardiac failure. He was placed in an oxygen tent and all medication stopped except morphine. There was a remarkable change from a totally irregular to a regular cardiac rhythm, rate 110. The question of auriculoventricular dissociation was considered. He grew rapidly worse, and died three weeks after entry.

Clinical Discussion

Dr. J. H. Means: It seemed clear at that last entry, the only time I ever saw him, that the major difficulty was rheumatic heart disease with aortic and mitral valve lesions. He had a very large fibrillating heart. He also had a history of angina. He also had a suggestion of possible thyrotoxicosis which inter-

ested us in regard to the question whether it was in any way playing a rôle in the production of the symptoms. We can have thyrotoxicosis in heart disease and rheumatic infection. I have seen that before. There was apparently a definite stare, exophthalmos and a palpable thyroid. There was a very slight systolic thrill with a bruit in his neck which interested us a good deal. I felt that it was more above than below the clavicle. What the origin was I was not sure—whether it was a purely aortic stenotic murmur or whether the thyroid played a rôle in its production. I thought the proper thing to do was to give iodine, which we did. He did not improve, so we concluded that he probably had no thyrotoxicosis.

The question as to whether he had ever had subacute bacterial endocarditis came up. There was a report of a positive culture. He was however fibrillating, which I believe is very unusual in subacute bacterial endocarditis. He apparently had made marked improvement after that diagnosis had first been made, and we concluded that it had been a wrong diagnosis.

It will be interesting to see what the autopsy showed, in the first place what the thyroid was like, what the coronaries were like and whether there was any evidence of bacterial endocarditis.

Dr. Paul D. White: There are two other points, one of which concerns the systolic murmur and thrill at the right side of the neck. In aortic stenosis the characteristic murmur and thrill are maximal over the aortic valve area, but now and then they are unusually well heard and felt at other points, even over the apex of the heart and in the neck. I suppose that the findings in the neck in this case may have been associated with aortic stenosis rather than with a thyroid bruit. Moreover there had been here an earlier diagnosis of aortic stenosis in addition to aortic regurgitation.

The second point is that of subacute bacterial endocarditis. As Dr. Means said, the evidence against it is partly the finding of auricular fibrillation and partly the duration of time since the previous diagnosis had been made, with fair health in the interval. I think we had no electrocardiographic record of the new abnormal rhythm he had just before death, did we, Dr. Graybiel?

Dr. Graybiel: No, we did not.

Dr. White: Did he have digitalis?

Dr. Graybiel: Yes, he had considerable, about 3 grains a day.

Dr. White: It is possible that the digitalis produced that abnormal rhythm and may have been partly responsible for his toxic condition, but we cannot prove that. Many patients take such a dose for months without any toxic symptoms. Nevertheless that may have been the cause of the tachycardia.

The exact cause of death is a mystery. Among other things we have to think of pulmonary embolism. We shall have to depend on the autopsy findings for a possible answer. If you found no adequate cause at autopsy we may have to attribute the death to the abnormal cardiac rhythm.

I recently received from another city an electrocardiogram showing ventricular fibrillation during death from angina pectoris. As the first record of the sort that has been taken, this was of some interest. It is conceivable that the patient being discussed here may have had ventricular fibrillation.

Dr. Howard B. Sprague: I have just one point to make on the relationship of auricular fibrillation and subacute bacterial endocarditis. I think we have had only one case of subacute bacterial endocarditis with auricular fibrillation at autopsy here in ten years. For a short time prior to the onset of the bacterial endocarditis in that case the heart was restored to normal rhythm with quinidine. The point was brought up in relation to the present case that the heart might have been restored to normal rhythm with quinidine. I do not believe there was any real relationship in the previous instance between the disappearance of the auricular fibrillation with quinidine and the onset of subacute bacterial endocarditis, or that the fibrillation made him less susceptible to bacterial endocarditis. Still that combination is very rare.

Clinical diagnoses (from hospital record)

Chronic rheumatic heart disease with aortic stenosis and regurgitation and mitral stenosis and regurgitation with auricular fibrillation.
Mild hyperthyroidism?

Anatomic diagnoses

Rheumatic heart disease.
Acute and chronic rheumatic endocarditis of the mitral, aortic and tricuspid valves with aortic stenosis and regurgitation, mitral stenosis and tricuspid regurgitation.
Hypertrophy and dilatation of the heart.
Chronic adhesive pericarditis.
Fibrous pleuritis.
Chronic passive congestion.
Lymphoid hyperplasia.
Cholesterinosis.
Atheromatosis.
Aschoff granules in the myocardium.
Acute glomerular nephritis.

Pathologic Discussion

Dr. Tracy B. Mallory: At autopsy we found an immensely hypertrophied heart with marked involvement of both the aortic and mitral valves,

the aortic undoubtedly showing both stenosis and insufficiency and the mitral chiefly stenosis. There was also a quite definite tricuspid insufficiency. The pericardium was slightly adherent but not markedly so. I think that played a very slight rôle.

The other organs were all essentially negative in gross except for chronic passive congestion.

The question whether or not he may have had hyperthyroidism interested us considerably because we have had several other cases in which the differential diagnosis of hyperthyroidism in the face of a cardiac lesion has come up, particularly in rheumatic cases. We have two cases in which the clinical evidence in favor of hyperthyroidism was much stronger than in this instance, in which we failed to find any suggestion of hyperplasia in the thyroid at autopsy, and there has risen in my mind the question whether in rheumatic fever an elevated basal metabolic rate may sometimes occur out of proportion to the degree of fever the patient shows.

So far as I can make out from the microscopic sections of this case there is no trace of hyperplasia at all. It is a normal thyroid. The acini are well filled with colloid, the epithelium normal in character. He had been given iodine, but we rarely fail to find some persistent hyperplasia in any of the true thyrotoxicosis cases which have responded to iodine. I feel that we can pretty safely rule out hyperthyroidism.

DR. MEANS: I think I have never seen at operation or autopsy a normal thyroid in a patient who had had full blown thyrotoxicosis and who had made a marked response to iodine.

DR. MALLORY: The sections from the heart show marked perivascular fibrosis and in several areas definite Aschoff granules of a rather acute type.

The lung in this case shows the picture of ordinary chronic passive congestion and partial collapse, no acute lesions.

The liver is rather interesting. Here is a man with a long story and with a very marked long standing cardiac lesion, judging by the degree of stenosis of the valves, the tricuspid insufficiency and the degree of hypertrophy. Here we have no gross destruction of the central cells in the alveoli. On the other hand microscopically in the centers of the lobules there is very slight definite acute fresh necrosis which I should be inclined to connect with an acute flare-up of rheumatic fever at the time of death.

An interesting and totally unsuspected finding is a significant degree of acute glomerular nephritis. There is quite diffuse involvement. I think it is marked enough so that there is no question but that if a non-protein nitrogen test had been done it would have shown that he had retention.

His aorta shows nothing definitely suggestive of a rheumatic lesion, but it shows quite well marked atheroma, unusual in extent for a man only twenty-one.

DR. MEANS: Was there anything about the coronaries, either themselves or their mouths, having any bearing on the angina?

DR. MALLORY: They were frankly negative. I have a definite impression that angina is by no means rare in young people with aortic involvement. It is quite rare in young people with pure mitral lesions. I am sure however that I have seen a number of cases in quite young people who have had either aortic regurgitation or stenosis and what we should definitely call angina.

DR. WHITE: Dr. Mudd and I made a report[1] of eight cases of angina pectoris in young people in 1927. All of these cases had rheumatic aortic regurgitation; we had not encountered any patients with mitral stenosis alone who had angina pectoris in youth; but soon after that, namely in December 1928, I saw one or two definite cases of that sort in Vienna. The association of mitral stenosis and angina pectoris is certainly very rare. It is interesting that in the series reported by Thomas Lewis in *Heart* for July 1931[2] all the cases showed aortic regurgitation.

A PHYSICIAN: Do you think it is a real angina or a localized infection that causes the pain?

DR. WHITE: I do not know the mechanism, but the pain is always relieved by nitrites. There may be a large vasomotor factor somewhat similar to that described by Lewis in the cases of his small series who showed hypertension at the time of the pain. The pain is characteristic of angina pectoris, but it is becoming more and more evident that we shall have to subdivide angina pectoris into several different groups. Even if we do subdivide the cases we must, however, still have a wholesome respect for this important symptom.

(1) Paul D. White and Seeley G. Mudd, Angina pectoris in young people. American Heart Journal, October 1927, 3:1.
(2) Thomas Lewis, Angina pectoris associated with high blood pressure and its relief by amyl nitrite. Heart, 15:305.

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CANCER AND TUBERCULOSIS

THE relationship of carcinoma and tuberculosis has long been a source of controversy. Proponents can be found for the belief that carcinoma tends to be associated with tuberculosis, for the belief that tuberculosis and cancer are mutually antagonistic, and finally for the belief that there is no relationship between the two conditions. The last flurry of excitement in this field arose from the statistics presented by Pearl[1] on the basis of the autopsy findings. He found a negative association between cancer and tuberculosis. This was carried even a step further in the actual attempt to make use of tuberculin in the treatment of cancer. This method of treatment naturally has fallen into disuse.

Of intense interest is the recent article of Wilson[2], in which he definitely shows not only that there is a probable positive association between cancer and tuberculosis but points in addition to serious flaws in Pearl's statistical handling of his data.

To the pathologist and clinician, there are several instances in which tuberculosis and cancer appear definitely related. One is the development of epidermoid carcinoma in the lesions of lupus. Another, provided one accepts Hodgkin's disease as a neoplastic process, is the long known but not understood relationship between Hodgkin's disease and tuberculosis of lymph nodes.

Unfortunately, in most large autopsy series, but little accurate information as to correlation of minor degrees of tuberculosis with malignancy exists, since in most instances autopsies are done to ascertain the cause of death rather than in an effort to pay detailed attention to every type of lesion present in the body. It is to be hoped with the growing interest in the subject that eventually observations will be available in sufficient amount to settle once and for all this intensely interesting point.

One cannot but congratulate Dr. Wilson on the thorough way in which his statistical material is presented and the numerous valuable clinical points that he has brought out in connection with his critical analysis of this problem.

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1 Pearl, R.: Am. J. Hygiene, 9:97, 1929.
2 Wilson, E. B.: Am. J. Cancer, 16:227, 1932.

THE TREATMENT OF FACIAL PARALYSIS AND FACIAL SPASM

BOTH facial paralysis and facial spasm have been subjected to new forms of treatment in the last few years, with somewhat better results than have previously been obtained. In cases of severe facial paralysis due to damage of the nerve within the Fallopian canal, either resulting from trauma or disease, the facial nerve will not recover spontaneously. Efforts, therefore, have been made to resuture the damaged peripheral portion into another adjacent nerve. The second nerve usually used in the past has been the spinal accessory, although a number of operations have been reported in which there was a facial nerve anastomosis with the hypoglossal, the descendens noni and the glossopharyngeal. The results have been equivocal. In some cases fairly good action of the paralyzed muscles has been obtained, particularly when the spinal accessory was used. Like all peripheral nerve surgery, much depends upon the technique of the operation.

The most recent contribution to the literature comes from Sir Charles Ballance[1], one of the earlier investigators of facial nerve anastomosis. He now introduces a new operation of nerve grafting into the Fallopian canal by intracapsular methods. After many animal experiments, he has found that it is possible to resuture the ends of the divided nerve within the canal and this has been performed by him a few

times with a fair degree of success. Still more rarely, the nerve can be lifted out of the canal, the injured parts cut away and the ends of the nerve resutured. Although these two procedures can occasionally be carried out, the operation usually resorted to is to employ a nerve graft taken from either an intercostal nerve, the descendens noni, or the external respiratory nerve of Bell, and place this between the divided ends of the damaged facial nerve in the Fallopian canal. A complete mastoid operation must be done as the first stage to expose the outer wall of the canal and at a second stage the wall can be removed and the nerve graft inserted.

This delicate operation appears to have been successful in the hands of Sir Charles Ballance and should be used in long-standing cases if the galvanic response to the muscles is still retained. The operation should be done as early as possible after the damage to the facial nerve and may even be performed in spite of slight sepsis.

Another disease of the facial nerve is clonic facial spasm. The etiology is varied, but often the condition appears as a late manifestation of facial paralysis. Dr. Wilfred Harris[2], who has long been known for his work on peripheral nerves, has recently suggested two procedures for treating this condition. A simple operation is to inject with alcohol the two main branches of the facial nerve where they cross the posterior border of the mandible in front of the ear. By this method relief from facial spasm may last for three to six months. The condition is never permanently cured and, somewhat analogous to trigeminal neuralgia, one has to resort to more definite surgical methods as time goes on. The operation recommended by Harris is to divide the facial nerve close to the stylomastoid foramen and to suture the peripheral end to the proximal end of the hypoglossal. By this method complete facial paralysis is established for the time being and the spasm stopped. If the operation is successful, however, innervation of the paralyzed muscles is established through the hypoglossal nerve. The operation is a delicate one and there are many reasons for failure, but when carefully done, followed by prolonged postoperative care, the results are good. The postoperative care is most important as the patient should have galvanic stimulation to the paralyzed muscles for a period of many months, two or three times a day. Massage should be also used and a facial splint which holds up the corner of the mouth is a valuable adjunct to the physiotherapy.

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1 Ballance, Sir Charles and Duel, A. B.: The operative treatment of facial palsy. Arch. Otolaryng. 15:1-70, January 1932.

2 Harris, Wilfred and Wright, A. D.: Treatment of clonic facial spasm. Lancet 1:657-662, March 26, 1932.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

MILLER, RICHARD H. A.B., M.D. Harvard University Medical School 1910. F.A.C.S. Assistant Professor of Surgery, Harvard Medical School. Associate Surgeon, Massachusetts General Hospital. His subject is A Present-Day Review of Gastric and Duodenal Ulcer. Page 925. Address: 264 Beacon Street, Boston.

MOORE, GEORGE A. S.B., M.D. Harvard University Medical School 1911. F.A.C.S. Surgeon, The Moore Hospital, Brockton. Consulting Surgeon, Bridgewater State Hospital and St. Luke's Hospital, Middleboro. His subject is Color Photography of Pathologic Specimens. Page 934. Address: 167 Newbury Street, Brockton, Mass.

FELDMAN, A. Ph.G., M.D. Tufts College Medical School 1918. On the Visiting Staff of the Massachusetts Memorial Hospitals. His subject is A Case of Syphilis of the Liver Simulating Acute Surgical Abdomen. Page 937. Address: 484 Commonwealth Avenue, Boston.

DUBLIN, LOUIS I. Ph.D. Third Vice-President and Statistician, Metropolitan Life Insurance Company, New York. In charge of the Public Health Association. President, American Public Health Association. His subject is The Coördination of a Community's Health Services. Page 938. Address: 1 Madison Avenue, New York City.

WHITE, PAUL D. A.B., M.D. Harvard University Medical School 1911. Physician, Massachusetts General Hospital. Instructor in Medicine, Harvard Medical School. His subject is The Need of Occupational Therapy for Cardiac Patients. Page 942. Address: Massachusetts General Hospital, Boston.

YOUNG, EDWARD L. JR. A.B., M.D. Harvard University Medical School 1909. F.A.C.S. Assistant Visiting Surgeon, Massachusetts General Hospital. Surgeon, Faulkner Hospital. Consulting Surgeon, Robert B. Brigham Hospital. Associate Surgeon to Lawrence Memorial Hospital. Instructor in Surgery, Harvard Medical School. His subject is A New Instrument for Intestinal Anastomosis. Page 943. Address: 279 Clarendon Street, Boston.

BAZIN, A. T. C.M., M.D. McGill University Faculty of Medicine 1894. F.R.C.S., F.A.C.S. Professor of Surgery, McGill University. Attending Surgeon, Montreal General Hospital. Chairman of Council and Executive Canadian Medical Association. His subject is Some Surgical Aspects of Hepatic Cirrhosis and of Splenomegaly. Page 946. Address: 1538 Sherbrooke Street West, Montreal, Canada.

BOSTON MEDICAL LIBRARY

SILVESTER GARDINER, M.D.
1707-1786

Dr. Silvester Gardiner was a conspicuous figure in Boston in the period just prior to the Revolution. He was prominent in business, in politics, in church affairs and had considerable reputation as a physician. By his mercantile ventures and the profits from his profession he became the possessor of a fine estate and he was also the proprietor of great tracts of land in Maine.

Silvester Gardiner was well-born, for his family was one of those which had the prescriptive right to wear coat armor. He was born in South Kingston, R. I. in 1707, the fourth son of William Gardiner, who is described as a man of "handsome property and good position". As a young man Gardiner was considered rather dull, but his brother-in-law, Rev. Dr. McSparran found signs of future ability in his character and persuaded his father to give him a liberal education. The next eight years were spent in London and Paris in the study of medicine and the young doctor had practical and invaluable experience at St. Thomas' Hospital in London under Cheselden, whose lateral operation for "the stone" he later performed on a patient in Boston with complete success.

Dr. Gardiner returned to Boston, probably in 1732, for in that year he married and began the practice of medicine. The Gardiner home was a large house situated on what is now Winter Street. His apothecary shop under the sign of the Unicorn and Mortar, adjoining the home, was located on that part of Washington Street which then bore the name of Marlborough street. The family also owned lots of land on Ashburton Place.

Dr. Gardiner was not inclined to settle down to the quiet career of a solid citizen and general practitioner and he soon became known as a force in the community. He began to attract attention in medical circles by his lectures on anatomy which he gave before the "Medical Society of Boston, New England", a body which he had helped to establish. His practice was among a good class of patients as is shown by his having treated the governor's daughter, the son of Sir Henry Frankland, and a child of Andrew Johonnot. As behooved a man of his position he kept a coach in which he made his visits, while an apprentice made, on foot, the rounds among his poorer patients. Undoubtedly he did a great deal of charity work for he was a very religious man and served as Warden in King's Chapel for many years.

His numerous household came to include, in time, an assistant and an apprentice to whom he was to teach "physick, surgery and the business of an apothecary". This was the usual course of training for the ambitious young man who wished to become a doctor and Dr. Gardiner was known as an excellent teacher who possessed an extensive library of the best authorities on medicine. Dr. Gardiner's younger brother Joseph, who was also a physician, was frequently associated with him as were Dr. Pecker, Dr. Cotton Tufts and others.

Dr. Gardiner was nearly always fortunate in his business ventures though he met with a few reverses. He was interested in a factory project which later failed and he advanced sums of money to colonists in Maine which were never repaid. He owned large holdings in the Plymouth Proprietors and was made perpetual moderator of their meetings. The Kennebeck Company was incorporated in 1753 and founded various settlements in Maine on lands which they sold to the colonists on liberal terms. Dr. Gardiner was a prime mover in this plan and built numerous churches, dams, and sawmills to start each undeveloped new town on its way to prosperity. The town of Gardiner, Maine, is named for his family.

One of Dr. Gardiner's chief sources of income was his apothecary shop which was kept by his apprentice and helpers. Here was carried on an extensive wholesale and retail trade in drugs and medicines. Dr. Gardiner carried on a continual correspondence with Florentius Vassall and other dealers in London and was most particular that his products should be of good quality and his prescriptions properly filled. Every week orders came in from doctors in the neighboring communities as well as local custom and, in time, branch shops were opened in Meriden and Hartford, Connecticut.

In the possession of the Boston Medical Library is an interesting document, the manuscript diary of an apprentice of Dr. Gardiner, John Denison Hartshorn, a Concord boy of much talent and promise whose career was unfortunately brief, for he died of an epidemic while nursing the soldiers who had taken part in the fighting at Crown Point. This chronicle which covers the period from 1752 to 1756 gives a very interesting account of life at the Gardiner home, the methods of practice and remedies used by the doctor and an insight into his character, not entirely a pleasant one, for Dr. Gardiner seems to have been quick to anger and unguarded in his speech. He was prone to favoritism in his household and was known to strike his servants when provoked. He appears to have been a very busy man and to have had a keen interest in new scientific developments. It was the custom of the time to deliver to doctors the bodies of those who had been executed for crime and

Dr. Gardiner assisted at a number of dissections. In view of the present views on capital punishment it may be interesting for Bostonians to learn of the penalties inflicted upon two negro slaves who were convicted of poisoning their master at this time. The man was hung upon the gallows; the woman was burned to death.

Dr. Gardiner was married three times. His first wife was Anne Gibbins, the mother of his eight children. She was a woman of shrewish disposition, and, like her husband, was of Loyalist sympathies. Catastrophe overwhelmed the family when the Patriots confiscated the estates of all who retained their allegiance to Great Britain. Dr. Gardiner's real estate in Maine which amounted to more than 100,000 acres was forfeited as well as his house and lands in Boston which were sold at auction. All that was saved from the estate was the sum of four hundred pounds. The Gardiners fled in disgrace to Halifax with some neighbors of like sympathies, and later sailed from there to England where they located at Poole, Dorset.

Dr. Gardiner, although he firmly believed himself to be in the right, was inconsolable at the loss of all that made life worth while in the new world and he occupied his time in writing bitter letters to his friends. He was particularly incensed over "the seizing and carrying off all my stock and medicines by that theif Washington".

The exiled physician practiced medicine in England for a time but he must have felt that after the Revolution was over he might have some success in recovering his lost property, for in 1785 he returned to America. He settled at Newport, R. I., and resumed practice although he was now an old man. His heirs later received a portion of the timber land in Maine, but the rest of his large estate was utterly lost.

Silvester Gardiner died of a malignant fever in 1786, at the age of seventy-nine. His third wife survived him. He was bitter to the end as was shown by his will in which he cut off his son John, who had been a strong American sympathizer. A letter from this son to the father, which mentions his conduct before his exile, gives evidence of the fiery spirit and injudicious utterance of Dr. Gardiner at this time.

"Your plaudits," writes John, "to the souldiers when they had returned from the islands in this (Boston) Harbour & had boasted the number of rebels, as they called them, that they had killed are mentioned here much to your disadvantage and the whole conduct of your late wife during the Seige is mentioned even by your friends with uncommon asperity."

Naturally such a demonstration must have made Dr. Gardiner one of the first to be mentioned when the question of proscription of property arose.

A portrait of Dr. Gardiner by Copley shows a man of over forty with a strong face marked by a rather harassed, irritable expression, heavy brows, creased forehead and lines about the mouth.

Descendants of Dr. Gardiner, through his son John, afterwards lived in Boston and his grandson, John Silvester John Gardiner was an eloquent preacher at Trinity Church. The family of his sister Hannah to whom he left most of his property changed their name to Gardiner.

Silvester Gardiner was what was termed in his day "a man of parts," that is, he had culture, learning and natural ability. He possessed also that unflagging industry and aptitude for business which make for success. He was generous and public-spirited. His interests were almost as diversified as those of his contemporary, Benjamin Franklin. It was only such defects of character as lack of judgment and the acerbities of pride which prevented him from rising to greater heights. Had his sympathies been upon the side of his countrymen his story would have been entirely different and his name might have stood among those which Boston remembers and acclaims today.

As a physician his skill was unquestioned and he was often consulted by the profession. There is found in Hartshorn's diary a detailed account of an amputation performed by Dr. Gardiner which is worth quoting in its entirety.

"Dr. Gardiner, Doctr. Thos. Williams, Doct. Pecker, Jepson and myself went and amputated Tucker's wife's leg, after much persuasion and many arguments. We sat her in a chair & put a large Bowl of Sand under her, applyd the Tourniquet with a Compress or two upon the arteries. I handed the instruments. Dr. Williams held the tourniquets, after binding a Tape round the Leg about 5 inches below the patella for a Guide to the Knife. D. G. began the incision & divided quite thro the membrana adiposa. then Pecker drawing the skin tought (taut) next the muscles were divided, then the Catlin to divide the interosseous muscles, then w'h the Saw the Leg was seperated, five vessells were taken up, Lint apply'd & 2 pledgets Digest over them Two longitudinal compresses, three double about three inches wide, then a Malta Cross & then the double headed Bandages, afterwards an anodyne. Brought the Leg home & Pecker dissected it." The woman survived this harrowing operation and completely recovered.

It would be interesting to know if some of the books belonging to the extensive library of this Revolutionary doctor may not still be in existence in Boston. These volumes were probably sold at auction and widely dispersed, but it seems not unlikely that a few of them may survive to hold an honored place upon the shelves of the owner.

MISCELLANY

A RADIO MESSAGE PREPARED AND SPONSORED BY THE COMMITTEE ON PUBLIC EDUCATION OF THE MASSACHUSETTS MEDICAL SOCIETY FOR THE DEPARTMENT OF PUBLIC HEALTH

Beginning to Grow Up*

The privilege and responsibility of training the young child and providing him with a suitable home in which to grow belong to the parents. If they are to meet this obligation successfully it is necessary that they give the subject of child training the serious thought and consideration that it merits. There is no problem more worthy of the parents' time and efforts than that of helping to develop the child's personality so that he may become a happy and efficient adult. Being a good parent means more than merely loving the child. Knowledge, skill, and patience are required for this job just as for any other important task.

The work of bringing up a family should not be left to the mother alone. Both parents must combine their efforts and work together to bring out the best in their children and help them to form such habits that their minds and bodies will develop to their full capacities.

In considering the growing-up process we naturally think first of physical growth with its proper increase in weight and height and general body development. In order to permit such growth to progress at the normal rate, parents are careful in the selection of the amount and kind of food which the child receives, gradually changing, as the child grows older, from a simple milk diet during infancy to a more general mixed diet of cereals, fruits, vegetables, eggs, and meat by the time he is twelve or eighteen months old.

We also realize that during this same period the child shows signs of mental growth. During early infancy he sleeps most of the time, but gradually begins looking at his hands and later at the persons and objects around him. Before long he begins to play with simple toys, learns to say a few words and enjoys looking at colored picture books. These activities indicate increasing mental development as he reaches out for even greater contact with the world which surrounds him.

In addition we recognize from his changing behavior that his emotions are beginning to develop. He soon shows that he is pleased by praise and enjoys recognition and approval, whereas he manifests dislike of scolding and disapproval and resents being entirely ignored. A little child gets great satisfaction from the attention of others and he quickly finds out how he can get it; but if he is not given a little attention in the form of approval or praise when he is good he will surely try to get attention by being bad. He may even prefer punishment to receiving no attention whatever. This normal desire for attention is of the greatest importance and aid when trying to teach a child good habits. Baby ways should not be encouraged when he should be learning increasing independence and freedom of activity. A young child should be given ample opportunity for playing alone with his toys as he is easily excited and overtired by the unnecessary attempts of adults to entertain him.

There is much which a child has learned before he is old enough to go to school. He knows how to walk, talk, feed himself, dress and undress, and look after himself in the bathroom. He has learned how to play alone as well as in a group of other children where he needs to stand up for his own rights. He will learn these things only by doing them himself and not by having them done for him. The child who is a cry-baby at school is usually the child who has been babied too long at home and who was not allowed to learn independence and develop courage in his first few years.

It is unfortunate when a child's home contains many things that he is not allowed to handle because he may break or spoil them. It is occasionally necessary to say "Don't touch", but most of a child's time should be spent where he can touch things. Curiosity should not be carelessly discouraged. Before saying "Don't" to a child always stop and ask yourself if he is doing something which he must be taught not to do or have you merely the "'Don't' habit" yourself.

Imitation is another factor in the process of beginning to grow up. Nearly everything a child does he has seen someone else do. He may refuse a certain food if he sees some other member of the family refuse it. He learns to slap by being slapped. He likes to use a carpet sweeper or a snow shovel because he has seen a grown-up use similar things. Habits of speech are also acquired by imitation. He uses the same phrases and emphasis he has heard used whether ones of courtesy or of rudeness and bad temper. In the same way his likes and dislikes and fears generally begin by an imitation of those feelings in others. A child imitates all kinds of behavior. Be sure that he has the right kind to imitate.

One of the hardest things for parents is to let a child do things for himself at his own pace, neither holding him back nor pushing him too fast. It takes time and patience to let the three-year-old try to lace his own shoes, but he is learning a new, complicated and useful act and needs plenty of time to do it correctly. Do not scold him sharply about his mistakes or call him slow. He needs encouragement and approval. Let him see how it should be done and if unsuccessful today let him try again tomorrow.

It is desirable for parents to make every effort to settle their own differences of opinion for the sake of the children, but they should reach a mutual agreement in private and not argue and criticize each other's decisions in front of the children.

Obedience should be the natural result of the

*Broadcast: January 14, 1932, Station WBZA—4:50 P.M.

child's trust in his parents and not the result of fear. Teach your children to trust you and they will obey, but far more important than obedience is the teaching of such standards that the child will know what to do even when you are not there to direct him.

Certain things must be required of every child. He must not run out into the street where cars are passing, he must not play with matches, or turn on the gas stove, or hurt his baby sister. Every effort should be made to teach the child to obey absolutely in such important matters, and punishment may be necessary as a part of the process of teaching; but it is better not to make issues of less important matters.

If the parents expect a child to do what he is told, he will usually do it, but it is well to give him a little time to finish what he is already doing and not interrupt him unnecessarily. A warning of five minutes that bedtime is at hand will usually give him time to finish his play and put away his toys before going to bed. Satisfaction from obeying helps to form the habit of obedience. It is better to lead a child to obedience than to drive him to it. A constant "do this" and "don't do that" in matters of no importance should be avoided.

When a child is difficult to manage, has temper tantrums, refuses to eat, is timid or afraid, or says "no" or "I won't" to everything, there is always a cause for his behavior. Until the cause is discovered it is often best to ignore the difficulty. Worry, nagging, threats and repeated punishment rarely help. The cause is often a matter of poor management in the home. Parents must try to find out in what way they are dealing with the child unwisely. If they hope to help the child they must be willing to make changes in their own attitudes when they are wrong. It is often helpful to seek the advice of a doctor or some other person who has had training and experience in dealing with children's problems. Many useful suggestions are also to be found in the little book entitled "The Child From One to Six", obtainable for ten cents from the Children's Bureau, United States Department of Labor, Washington, D. C.

To the child the parent should be companion, friend, and confidant. The parent whose little child brings all his troubles, doubts, and questions to him for help and solution has established a relationship of great value. This can never be brought about if the parents' attitude is indifferent, cold, or repellent. Parents who are too busy to bother with a little child's troubles and questions are seldom asked for needed advice and help in meeting the many greater problems in the later years of childhood.

Let your child develop normally and let him act his own age. Do not make a baby of him when he is no longer actually a baby, yet do not ask the impossible of him and expect him to behave as a mature adult would. He is still a child, and in so far as possible try to see the situation from his own point of view rather than blindly to impose your own will upon him. Remember that a child is an individual person and has a right to develop all that is best in his own individuality, in his own growing personality.

HARVARD MEDICAL SCHOOL

Additional appointments, April 25, 1932.

From February 1 to September 1, 1932:

Oscar Orias, M.D., Research Fellow in Physiology.

Thomas Nash White, Jr., Ph.D., Research Fellow in Preventive Medicine and Hygiene.

LeRoy Dryden Fothergill, M.D., Research Associate in Comparative Pathology.

Arthur Tremain Hertig, M.D., Research Associate in Comparative Pathology.

From March 1 to September 1, 1932:

Walter Orville Blanchard, M.D., Assistant in Medicine.

Hugh Frederick Hare, M.D., Assistant in Roentgenology.

Herbert Bristol Nelson, M.D., Assistant in Obstetrics.

Gulli Lindh Muller, M.D., Research Fellow in Medicine.

Merrill Moore, M.D., Research Fellow in Neuropathology.

The resignation of Richard Upjohn Light, M.D., as Arthur Tracy Cabot Fellow in charge of the Laboratory of Surgical Research was received and accepted to take effect March 24, 1932.

The resignation of Fritz Bradley Talbot, M.D., is to take effect September 1, 1932. Dr. Talbot becomes Clinical Professor of Pediatrics, Emeritus.

Ashton Graybiel, M.D., 1930 (Harvard) has been awarded a William O. Moseley, Jr., Traveling Fellowship for 1932-33.

Perry Cossart Baird, Jr., M.D., 1928 (Harvard) has been awarded the Edward Hickling Bradford Fellowship for 1932-33.

Fellowships have been awarded for 1932-33 to students in the Harvard Medical School as follows:

George Cheyne Shattuck Memorial Fellowship to Merritt B. Low.

John Ware Memorial Fellowship to Benjamin F. Miller.

Charles Eliot Ware Memorial Fellowship to Fiorindo A. Simeone.

James Jackson Cabot Fellowship to Harry L. Kozol.

James Jackson Cabot Fellowship to Benjamin Alexander.

Charles Sedgwick Minot Fellowship to Louis Zetzel.

DeLamar Research Fellowship to Lowell F. Bushnell.

DeLamar Research Fellowship to Rolf Lium.

DeLamar Research Fellowship to Daniel J. Mullane.

DeLamar Research Fellowship to Dale G. Friend.

DeLamar Research Fellowship to Irving H. Saxe.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR MARCH, 1932

Diphtheria, which had shown a slight increase in the month of February, has again made a new low for March.

Typhoid fever is maintaining a low record which was set last year.

Tuberculosis, pulmonary and other forms, likewise continues its downward trend.

Influenza and German measles are both lower than is usual for this month.

Scarlet fever continues the marked prevalence begun early in the fall, and mumps is likewise above the average for the month of March.

Lobar pneumonia, which had been running quite low during the fall and winter, has suddenly increased to twice the incidence of last year, the number of cases reported being larger than in any year during the past five.

Whooping cough and chicken pox are also slightly more prevalent than usual.

Poliomyelitis, measles and epidemic cerebrospinal meningitis were reported about the number of times expected.

RARE DISEASES

Anterior poliomyelitis was reported from Lawrence, 1; Mansfield, 1; Quincy, 1; Total, 3.

Dysentery was reported from Boston, 1.

Encephalitis lethargica was reported from Belmont, 1; Winchendon, 1; Total, 2.

Epidemic cerebrospinal meningitis was reported from Boston, 4; Granby, 1; Medford, 1; North Attleboro, 1; Weymouth, 1; Out of State, 1; Total, 9.

Malaria was reported from Chelsea, 1.

Pellagra was reported from Gardner, 2.

Septic sore throat was reported from Amesbury, 1; Arlington, 1; Bedford, 1; Belmont, 1; Boston, 15; Cambridge, 1; Fall River, 1; Framingham, 1; Haverhill, 1; Lowell, 1; Northampton, 1; Petersham, 1; Quincy, 1; Winthrop, 1; Worcester, 3; Total, 31.

Trachoma was reported from Boston, 1; East Bridgewater, 1; Marshfield, 1; Winthrop, 2; Total, 5.

Undulant fever was reported from Pittsfield, 1; Wilmington, 1; Total, 2.

MONTHLY REPORT OF CERTAIN COMMUNICABLE DISEASES

	Cases in Entire Pop.				Case Rates per 100,000 Pop.		
	Mar. 1932	Mar. 1931	Proso. Index*	Epi. Index†	Mar. 1932	Mar. 1931	Expected Rates‡
All Causes	11,356	9539	—	—	264.3	223.1	—
Ant. Polio.	3	3	7	.4	.1	.1	.2
Diphtheria	176	199	370	.5	4.1	4.7	8.6
Ep. C. S. Men.	9	8	7	1.3	.2	.2	.2
Measles	2418	2026	3641	.7	56.3	47.4	84.7
Pneu. Lobar	809	408	567	1.4	18.8	9.5	13.2
Sc. Fever	2336	1636	1378	1.7	54.4	38.3	32.1
Tbc. Pul.	429	451	409	1.0	10.0	10.5	9.5
Typhoid Fever	9	8	14	.6	.2	.2	.3
Wh. Cough	1062	877	1328	.8	24.7	20.5	30.9
Chicken Pox	1020	1050	—	—	23.7	24.6	—
German Measles	77	482	—	—	1.7	11.3	—
Gonorrhea	490	550	—	—	11.4	12.9	—
Influenza	91	65	—	—	2.1	1.5	—
Mumps	1411	683	—	—	32.8	16.0	—
Syphilis	400	420	—	—	9.3	9.8	—
Tbc. Other Forms	40	54	—	—	.9	1.3	—

*This index is an attempt to estimate the number of cases based on the trend during the past years which can be expected to occur, and is for the purpose of comparison with the number of cases which actually did occur.

†This ratio expresses how prevalent the disease is compared with the index mentioned above; 1.0 indicates that the actual number of cases equals the expected number. A larger number means a greater prevalence, and a smaller number a lesser prevalence than expected. Thus 2.0 would indicate twice the expected number, and .5 half the expected number of cases. The method used to determine the indices is described in the August 18, 1927 issue of the *Boston Medical and Surgical Journal*.

‡Calculated from the Prosodemic Index.

A MEMORIAL TO DR. NOAH FIFIELD

On Saturday, April 23, a stone marker was set in the town of Weymouth indicating the site of the home of Dr. Noah Fifield, for sixty years the honored citizen and physician of the town. Dr. Fifield came to Weymouth in 1806 as colleague to the famous Dr. Cotton Tufts, one of the founders of the Massachusetts Medical Society, who died in 1815 leaving his widespread practice to the younger man.

Dr. Fifield was born in East Kingston, N. H., in 1783, of English parentage, and first studied after the fashion of the time with the noted McKinstry of Vermont. He then came to Harvard, where Dr. Tufts was greatly attracted by his personality and solid attainments in medicine. In 1820 he married Miss Hannah Cranch Bond of Dorchester, of the Bond family, founders of the Harvard Observatory, and

bought the extremely picturesque prerevolutionary house which he made the centre of town life. Three children were born, Dr. George Fordyce, Dr. William Cranch Bond, and Mary Sanborn, the first dying young and the second educated in England (Royal College of Surgeons) and many years at the Boston City Hospital.

Dr. Noah Fifield was held in great affection and trust and was foremost in all activities for the public welfare. Both he and his wife were ardent workers in the anti-slavery cause. He died in 1867 in Dorchester. The three Doctor Fifields are commemorated in the Memorial Room at the Boston Medical Library, which also treasures the only known portrait of Dr. Cotton Tufts.

TUBERCULOSIS ABSTRACTS

BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Newspapers thrive because man's appetite for the new is insatiable. Yesterday's happenings taste flat today and are forced off the front page to make way for today's latest gossip. In medicine, news is as eagerly embraced. Not, however, to satisfy a childish desire for the novel but rather because existing knowledge is never complete enough to satisfy. Our fight against tuberculosis is, at best, a compromise because our diagnostic and therapeutic weapons are still inadequate. We need new knowledge to supplement the old. In fact, every doctor owes to his patient the obligation to keep abreast of the times. David A. Stewart, veteran pioneer of the tuberculosis movement in Canada, recently reviewed advances made in tuberculosis, excerpts of which are here presented:

WHAT IS NEW IN TUBERCULOSIS

The strategy of our campaign against tuberculosis is new. Our old objective was to heal the sick man who came to the doctor of his own accord because he was sick. He seldom came early because he had few symptoms or none. Our new objective is to find the men, the women, and especially the children who have been in contact with the sick man. Management of the individual case is not enough; we now ask, "who have been *seeded* by this man's infection, and what can we do for *them?*"

The kinds of people we have to diagnose are new. When the doctor goes scouting among contacts he finds that all his decisions are more difficult. He finds also that "the fountain pen is mightier than the stethoscope" because the history of tuberculosis in the family is so important. Probe deeply with your pen; nor be satisfied until you have all the family chest portraits in your x-ray album. Grandmother's "stomach cough," when the x-ray has passed upon it, may explain the indefinite illnesses of half a dozen grandchildren.

NEW IN DIAGNOSIS

A revolutionary change in diagnosis is the comparative eclipse of the stethoscope by the x-ray plate. The stethoscope is still useful but not an instrument of precision. It leaves half of our chest problems untouched. It can but rarely find early tuberculosis and probably never earliest tuberculosis. It cannot follow at all accurately the progress of disease or of healing. Nearly all the questions we need to ask are answered more clearly by the x-ray plate. Of course the x-ray plate must be well made and well read lest blind leaders lead the blind into diagnostic ditches.

Opaque oil, such as lipiodol, is a wonderful help in differentiating from tuberculosis a condition which is considered rare but which is really common, namely, bronchiectasis. This new diagnostic measure has had its full share of misuse and misinterpretation.

The bronchoscope is coming more into use as a chest instrument but has still a broad field to cultivate.

Examination of the sputum is as essential as ever. But now we are not satisfied with a single or a dozen negative findings, for they settle nothing. Now we incubate and grow the germs on potato medium.

The tuberculin test is perennially new, and it is more prognostic than diagnostic. A tuberculin reaction in an adult is something like a vaccination scar. When a young child reacts to tuberculin he should be thoroughly examined and closely watched, and his whole household examined too.

NEW IN TREATMENT

"Outdoorness" is not a specific for tuberculosis but a natural advantage which all living people should have, especially the chronically sick. Sunlight treatment is still empirical but useful as a general tonic. He who would use it safely must know its indications and contraindications, its therapeutics, dosage and toxology. Light has been over-praised and abused. It should be applied in measured doses, in well-selected cases and always watchfully.

Rest is still the great basis of all treatment of tuberculosis. Fatigue makes ill; rest makes well. Tuberculosis can be cured, but the prices to pay are time and patience, and the foundation is rest. But at last pulmonary tuberculosis has found a "specific". It is collapse or compression of the diseased lung or lungs, which is simply a local application of rest. Artificial pneumothorax is not new but the widening of its scope is. Phrenic paralysis to raise the diaphragm and thoracoplasty to collapse the chest wall are new and their scope widens daily. Artificial pneumothorax is being applied earlier and earlier and later and later. Using it in early stages is not using a sledge hammer to drive a tack, because pneumothorax is not a sledge hammer and any definite focus of tuberculosis is not a tack. Pneumothorax has no features that can be called bad, except the formation of fluid in some cases. The best indication is the lack of contraindications and there are no contra-

indications. Hemorrhages or expectoration with bacilli or beginning cavitation—even a small cavity —urge pneumothorax.

In late, neglected, or advancing disease the prognosis goes up many points when collapse is possible for the worse lung, and is improved even more proportionally when both of two bad lungs can be collapsed. We now freely apply some collapse to both lungs and even put men with double collapse to work. The more passive measures called *taking the cure* must now be supplemented by active measures of *giving the cure.* "Milk, eggs, and the back veranda" never was a reasonable formula and now is hopelessly obsolete.

NEW ABOUT COMPLICATIONS

We believe now that tuberculosis in the intestine is almost as treatable and curable as tuberculosis in the lung — if we make the diagnosis and apply the treatment soon enough. Early diagnosis of tuberculous enteritis can be made only by the *x*-ray. The author gives barium meals as a routine in all cases of pulmonary tuberculosis. Treatment is begun early and the old picture is seldom seen except in a patient neglected to sheer hopelessness before treatment is begun. Treatment includes a smooth diet, light therapy, and all general measures made more intensive.

The larynx is the doorstep of the lung. Good treatment for the lung is the best element in treatment of the larynx. Collapse treatment has done much to reduce tuberculosis in the larynx from a major complication almost to a minor one. Add to that rest, silence, and sun applied carefully.

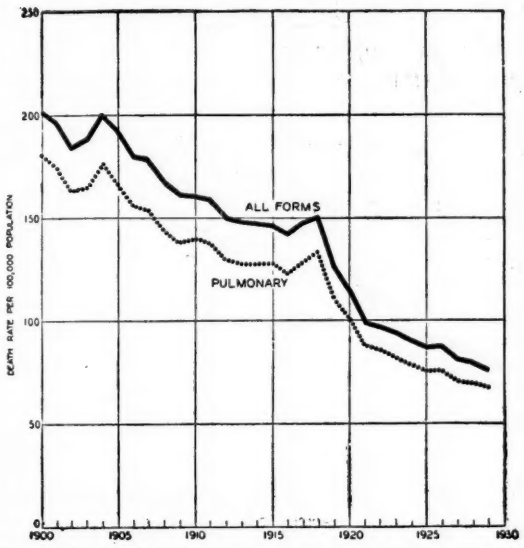
The red terror of hemorrhage is tamed. Half the pharmacopeia has been tried and has failed or done harm. The worst modern mistreatment of hemoptysis is morphine, though a little heroin to *modify* (not stop) cough is valuable. Icebags on the chest are of the devil. The modern treatment for hemorrhage is rest, reassurance, a little heroin, mild laxatives, bland foods—and the *specific.* That specific is collapse therapy.

NEW LIGHT ON CHILDREN

Most important of all is the new light on tuberculosis in children. Our ideas about children lagged a generation behind our knowledge about adults, chiefly because we had a single standard for measuring disease in the adult and the child. But the two types are almost two diseases, so different that they have little more than the causal organism in common. Diagnosis, treatment, and prognosis all differ as between the young and the older. Symptoms in the childhood type are absent or slight and no single symptom is pathognomonic. The physical examination cannot disclose it. But the great *new light* is shed by the x-ray.

"The discovery of the child in tuberculosis opens up a great new continent for exploration. It is in this new continent of childhood that the most fruitful exploration of the anti-tuberculosis forces will be made during the next generation. . . . What we wish to do for the race must be done for the child. On their behalf we must even learn a good part of our tuberculosis all over again."

What is New in Tuberculosis, David A. Stewart, The Canadian Med. Assn. Jour., January, 1932.



Tuberculosis Death Rates—U. S. Registration Area—1900-1929.

INTEREST IN THE INTERNATIONAL UNIVERSITY

This institution was formerly a subject of contention in Massachusetts and was finally refused recognition by the Legislature. This approval was sought by Dr. Edward L. D. Turner, the controlling factor in the development of this institution so far as Massachusetts is concerned.

It is now reported that the Rhode Island Senate feels that "Rhode Island has become the dumping ground for schools selling degrees on a mail order basis" and has passed a bill 27 to 8 which provides that all schools issuing degrees must be approved by the State Department of Education. After finding Massachusetts unreceptive Dr. Turner moved this medical school, under the control of the International University so called, from Boston to Providence, although he was given a charter authorizing the issuance of degrees. The Board of Registration in Rhode Island has refused to accept the graduates of this school for examination preliminary to certification as practitioners of medicine.

The International University was opened in March, 1931. Dr. Turner, the President, is also listed in the Boston directory as Registrar of the College of Physicians and Surgeons at 517 Shawmut Avenue, Boston.

He has repeatedly appeared before our Legislature in opposition to efforts to restrict the activities of medical schools not approved by the Committee of Education of the American Medical Association.

It is alleged that while he was attempting to get the International University into operation in Massachusetts he was violating the state's corporation laws, and he was brought before the court. The

record appears, according to the local press, that the International University was fined $1200 by Judge Adlow for violating the state's corporation laws and $200 for offering degrees without a special act of the General Court.

PNEUMONIA PATIENTS RECEIVE SERUM TREATMENT IN CERTAIN NEW YORK HOSPITALS

It has been reported in the *Weekly Bulletin of the City of New York, Department of Health*, that children now entering the pediatric services of Bellevue Hospital, the Fifth Avenue Hospital, the Nursery and Child's Hospital, and Harlem Hospital receive anti-pneumonia serum whenever the case seems suitable for serum treatment. Although the results have been satisfactory thus far, the number of cases is too small to permit a definite evaluation. Serum treatment should be begun early if it is to be effective.

AN ARGUMENT FOR A RESTRICTED DIET

The President of the Dental Society and the Surgeon Lieutenant of the Royal Naval Hospital of Cape Colony find themselves confused by the conditions which exist in some of the elementary Pacific isles and especially conditions on the island of Tristan da Cunha. There a survey has been made of a group of people, descendants of castaways from the sea. Since the War of 1812 when the British seized this island these people have lived very largely by fishing, raising wheat and a few animals. They have no laws and yet are moral and temperate. They are hospitable, industrious and healthy.

The surprise to the dentist and surgeon consisted in the fact that all but 25 of the 156 inhabitants had teeth entirely free of decay though ages ranged up to 92. No disease was found among these people whose diet consisted of potatoes, milk, fish and eggs, sheep being kept for clothing and rarely used as meat except on holidays. The custom of eating only one article of food at a meal by the inhabitants of this island is regarded as promoting good digestion. For example, a meal may consist entirely of potatoes, another of fish and another of eggs. Whether this uncomplicated diet is advantageous is problematical.

A SERUM TEST FOR THE DIAGNOSIS OF CANCER

A serum reaction in the presence of cancer has been reported by Dr. H. J. Fuchs of Berlin. The explanation is that fibrin from the blood of a person free of cancer is broken down or digested by the serum of the blood of a patient afflicted with cancer with the production of non-protein nitrogenous substances which can be demonstrated by certain chemical reactions.

Professor M. von Falkenhausen claims that a simplification of this method lies in the use of a colorimetric procedure. He reports a verification of his process in eighty cases without a failure. Dr. von Falkenhausen has described his method in the *Deutsche Medizinische Wochenschrift*. The report does not give the date of publication of the article.

THE CHANGING AGE OF POPULATION IN ITS RELATION TO MEDICAL SCIENCE AND THE LIFE-SPAN EXPECTANCY

In 1920 statisticians show that 21% of our entire population was 45 years or more of age. In 1930 23% of our population was 45 years or older, which tends to show that in all probability in 1940 at least 25% of our people will be 45 years of age or older.

It may be inferred from the statistics that new problems are facing society in caring for the increasing number of aged people and may apply to the necessary expenditures for new hospitals and other institutions throughout the United States, needed to care for persons in the older decades of life. In other words there will be a demand for shelter and care for more people in the declining period of life than has been the case heretofore.

A PROBLEM CONNECTED WITH THE DISSEMINATION OF DISEASE

It is now believed that the distance covered by airplanes may tend to promote the distribution of such diseases as malaria by furnishing methods of travel to infection-carrying mosquitoes. It seems to be apparent that old endemic centres of danger, notably in the tropics and in more than one continent, are being explored and opened to at least temporary residence by a floating population. Officers of the United States Public Health Service have recently admitted that the possible importance of the aerial transportation of mosquitoes, particularly Aedes aegypti, has been a matter of serious interest to public health officials for several years. With the steady increase in passenger traffic by air from the centers in tropical countries, the hygiene of air transport service calls for careful consideration.

Although a certain amount of blame is attached to the mosquitoes, the greater danger, it is believed, may be due to the importation of infected human beings.

CANCER RESEARCH

In keeping with the astonishing progress made in the study of cancer, especially relating to its growth, behavior and dangers, there has been by skilled research workers concentrated study on the etiology and therapeutics of this morbid growth. There has, however, recently appeared in the *New York Times* an opinion that individual and disintegrated effort is probably futile and that it would be better if the money which probably amounts to $500,000 annually were concentrated on cancer research under the control of especially well-endowed institutions. Arguments at the present time seem

to be that what is needed is more x-ray apparatus and radium. Meanwhile deaths from cancer in fifty American cities with a total population of 30,000,000 have increased 58.2 per cent in 25 years. This has been regarded as possible misinterpretation of facts, because it may be that part of the increased number of recognized cases of cancer are due to advances in diagnosis and pathologic classification. Even so, the suggestion that only trained experts should be engaged in this study of cancer may be going a little too far, for the history of medicine has shown that independent minds have sometimes either logically or incidentally stumbled upon an understanding of medical problems. It is, therefore, a serious question as to whether individual concentration on the cancer problem should be discouraged and such persons led to interest themselves in other fields of study.

DOES LACK OF CARE EXPLAIN MATERNAL MORTALITY IN THE UNITED STATES?

Dr. Louis I. Dublin is quoted in the *New York Times* as stating that the lives of ten thousand mothers in the United States could be saved each year.

This statement was made in comparing the maternal death rate in this country with the rates in Denmark, Holland, Norway, Sweden and England and Wales.

He explains the difference on the assumption of better maternal care in the European countries and credits the midwives with a large influence in the lower mortality areas.

Dr. Dublin believes that two-thirds of our maternal deaths are preventable.

CORRESPONDENCE

ARTICLES ACCEPTED BY THE AMERICAN MEDICAL ASSOCIATION COUNCIL ON PHARMACY AND CHEMISTRY

535 North Dearborn Street, Chicago, Ill.,
April 29, 1932.

Managing Editor,
The *New England Journal of Medicine,*

In addition to the articles enumerated in our letter of March 26 the following have been accepted:

Chappel Bros., Inc.
- Chappel Liver Extract (Oral)
- Chappel Liver Extract (Subcutaneous)
  - Ampoules Chappel Liver Extract (Subcutaneous), 2.5 cc.

Gilliland Laboratories, Inc.
- Diphtheria Schick Test Toxin, Diluted Ready for Administration—Gilliland
- Diphtheria Toxoid—Gilliland

Hoffmann-La Roche, Inc.
- Digalen Injectable—Roche

Lederle Laboratories, Inc.
- Banana Allergenic Extract—Lederle, Beef Allergenic Extract—Lederle, Chicken Meat Allergenic Extract — Lederle, Codfish Allergenic Extract—Lederle, Cornmeal Allergenic Extract —Lederle, Crabmeat Allergenic Extract — Lederle, Green Pea Allergenic Extract—Lederle, Horse Serum Allergenic Extract—Lederle, Lamb Allergenic Extract — Lederle, Lima Bean Allergenic Extract—Lederle, Milk Allergenic Extract—Lederle, Orange Allergenic Extract—Lederle, Pork Allergenic Extract — Lederle, Pyrethrum Allergenic Extract—Lederle, Rice Allergenic Extract—Lederle, Rye Allergenic Extract—Lederle, Spinach Allergenic Extract—Lederle, Tobacco Allergenic Extract—Lederle, Wheat Allergenic Extract — Lederle, White Potato Allergenic Extract—Lederle, Chocolate Allergenic Extract—Lederle, Sheep Dander Allergenic Extract — Lederle, Horse Dander Allergenic Extract—Lederle, Orris Allergenic Extract—Lederle, Cow Dander Allergenic Extract —Lederle, Flaxseed Allergenic Extract — Lederle, Cottonseed Allergenic Extract — Lederle, Feathers Allergenic Extract—Lederle, Goat Dander Allergenic Extract—Lederle, Buckwheat Allergenic Extract—Lederle, Almond Allergenic Extract — Lederle, Peanut Allergenic Extract — Lederle, Dog Dander Allergenic Extract—Lederle, Egg White Allergenic Extract—Lederle, Kapok Allergenic Extract — Lederle, Mustard Allergenic Extract — Lederle, Cat Dander Allergenic Extract — Lederle, Rabbit Dander Allergenic Extract—Lederle
- Concentrated Pollen Antigens—Lederle, Series A, B, C, D, E
- Ragweed Combined Pollen Antigens — Lederle, Series E and F

H. A. Metz Laboratories, Inc.
- Ampules Salyrgan Solution, 2 cc.

National Drug Co.
- Undulant Fever Vaccine

Scott & Bowne Laboratories
- Scott's Norwegian Cod Liver Oil (Plain)
- Scott's Norwegian Cod Liver Oil (Flavored)
- Scott's Emulsion of Cod Liver Oil

Wall Chemicals, Inc.
- Walco Ethylene for Anesthesia

The following articles have been exempted and included with the List of Exempted Nonmedicinal Articles (New and Nonofficial Remedies, 1931, p. 481):

Lederle Laboratories, Inc.
- Glycerinated Allergenic Extracts—Lederle

Calco Chemical Co., Inc.
- Methylthionine Chloride (Calco)

Merax, Inc.
- Merax Mercury Cyanide Solution

Yours truly,

W. A. PUCKNER, *Secretary,*
Council on Pharmacy and Chemistry.

NOTICES

A CRUISE ARRANGED BY DR. MORRIS FISHBEIN FOR MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION AND THEIR FAMILIES

For reservations on Post-Convention special cruise to Havana, Cuba—Panama Canal Zone and Central America for members of the American Medical Association and their families, apply to Mr. Sam Burrans, 201 Tremont Street (Little Building), Boston, Tel. Hancock 3220-3221.

Special itinerary on S.S. Parismina of the United Fruit Company's famous great white fleet.

Lv. New Orleans, Saturday, 11 A.M., May 14.
Ar. Havana, Cuba, Monday, A.M., May 16.
Lv. Havana, Cuba, Tuesday, 1 A.M., May 17.
Ar. Cristobal, Canal Zone, Friday, A.M., May 20.
Lv. Cristobal, Canal Zone, Friday, 11 P.M., May 20.
Ar. Tela, Honduras, Monday, A.M., May 23.
Lv. Tela, Honduras, Monday, P.M., May 23.
Ar. New Orleans, Friday, 8 A.M., May 27.

All expense fares per person are from $140.00 to $220.00 plus $5.00 U. S. War Tax.

RADIO HEALTH MESSAGES

MAY-JUNE, 1932

Sponsored by the Public Education Committee of the Massachusetts Medical Society and the Massachusetts Department of Public Health.

Courtesy WBZ. Tuesdays, 4:20 P.M.

May
10 The Dangers of Being Fat
17 The Deaf Child
24 Medical Care
31 Growth and Development

June
7 Prenatal and Maternity Service
14 New Findings in Oral Hygiene
21 Community Public Health
28 Communicable Diseases

STATE HOUSE BROADCAST

Sponsored by the Massachusetts Department of Public Health.

Courtesy WEEI. Fridays, 12:30 P.M.

Health matters of public interest discussed by the Division Directors of the Department.

RADIO HEALTH FORUM

Queries from the public are answered under the sponsorship of the Department of Public Health.

Courtesy WEEI. Fridays, 4:50 P.M.

Questions on Health and Prevention of Disease may be sent to Radio Health Forum, State Department of Public Health, State House, Boston.

REPORTS AND NOTICES OF MEETINGS

MEDICAL SOCIETY ENTERTAINED AT STAMFORD HALL, STAMFORD, CONN.

The members of the Stamford Medical Society were entertained at Stamford Hall on Tuesday evening, April 12.

Dr. William E. Smith, president of the society, omitted the routine business affairs and turned the meeting over to Dr. Frank W. Robertson, the medical director of Stamford Hall.

Dr. Robertson introduced the three speakers of the evening, two of whom read papers treating with neuropsychiatric problems. Dr. Arthur Ruggles, superintendent of the Butler Hospital, Providence, R. I., read a paper on "Neurosis in General Practice." Dr. Clarence O. Cheney, director, New York State Psychiatric Institute and Hospital, New York City, read a paper on "Psychiatry in the Community," and Dr. Clarence G. Bandler, professor of urology, New York Post Graduate Medical School of Columbia University, New York City, read a paper on "The Newer Treatment of Prostatic Obstruction." After reading the paper, Dr. Bandler illustrated his subject with lantern slides.

After the meeting, a collation was served in the main dining room.—*Stamford Advocate.*

SUFFOLK DISTRICT MEDICAL SOCIETY

The Annual Meeting of the Suffolk District Medical Society was held in the Boston Medical Library, April 27, 1932. The following-named candidates for the officers of the society for the year 1932-33 were elected:

President: William H. Robey.
Vice-President: James H. Means.
Secretary: Leland S. McKittrick.
Treasurer: John Rock.
Commissioner of Trials: Channing Frothingham.
Councillor for the Nominating Committee: John W. Bartol.
Alternate: Lincoln Davis.
Committee on Supervision: Richard H. Miller, Stanley Cobb.
Committee on Social Meetings: Frederick W. O'Brien, Howard M. Clute, De Los J. Bristol, Jr., Lester A. Whitaker.
Auditing Committee: Donald S. King, Robert N. Nye, Francis C. Newton.
Censors: Francis W. Palfrey, Alonzo K. Paine, Horace Binney, George L. Tobey, Jr., Gerald Blake.
Councillors: A. W. Allen, A. E. Austin, J. W. Bartol, G. H. Bigelow, H. Binney, G. Blake, W. B. Breed, W. J. Brickley, J. E. Briggs, C. S. Butler, D. Cheever, R. C. Cochrane, F. H. Colby, F. J. Cotton, A. H. Crosbie, W. P. Cross, L. Davis, G. P. Denny, R. L. DeNormandie, W. H. Ensworth, R. Fitz, G. L. Gately, H. W. Goodall, R. B. Greenough, J. Homans, H. T. Hutchins, E. P. Joslin, F. S. Kellogg, R. I. Lee, G. A. Leland, L. S. McKittrick, T. J. O'Brien,

A. K. Paine, F. W. Palfrey, W. S. Parker, W. F. Regan, W. H. Robey, G. C. Shattuck, W. R. Sisson, Louisa Paine Tingley, G. L. Tobey, Jr., J. R. Torbert, F. A. Washburn, C. Wesselhoeft.

PLYMOUTH DISTRICT MEDICAL SOCIETY

The annual meeting of the Plymouth District Medical Society was held at the Ducey Hospital, Brockton, Massachusetts, on the evening of April 21, 1932. Dr. and Mrs. W. D. Ducey received the members as they entered the hospital. Dinner was served at 6 P.M. This was not a dinner, however, it was a banquet in every sense of the word and a most excellent one. A short business meeting followed the dinner. Dr. John J. McNamara, president of the society, gave a short address of welcome and all the members were then seated at the dinner table. It was a large and well-attended meeting. Physicians and surgeons from the Brockton District, including Norfolk, Bristol and Plymouth Counties were present. Those seated at the head table were President John J. McNamara, Vice-President Thomas H. McCarthy of the Massachusetts Medical Society, President-elect Charles G. Miles, Vice-President-elect David B. Tuholski, Dr. George A. Moore, Secretary, Dr. Alfred G. Smith, Treasurer, Dr. Griffin of Mansfield, Dr. Gilman Osgood of Rockland and Dr. Leon A. Alley, orator of the evening. Dr. George A. Moore read the records of the previous meeting which were accepted by the society, as read. Dr. John J. McNamara then called upon the Nominating Committee to make its report. This committee consisted of Dr. Thomas H. McCarthy, chairman, Dr. E. Dwight Hill of Plymouth, Dr. Richard B. Rand of North Abington. Dr. Thomas H. McCarthy read the report of the nominating committee as follows:

President: Dr. Charles G. Miles, Brockton.

Vice-President: Dr. David B. Tuholski, Brockton.

Secretary: Dr. George A. Moore, Brockton.

Treasurer: Dr. Alfred C. Smith, Brockton.

Councillors: Dr. E. Dwight Hill, Plymouth, Nominating; Dr. John J. McNamara, Brockton, Alternate; Dr. Thomas H. McCarthy, Brockton; Dr. John P. Shaw, Brockton; Dr. Alfred C. Smith, Brockton; Dr. Frederick W. Murdock, Brockton; Dr. Peirce H. Leavitt, Brockton.

Censors: Dr. John P. Shaw, Brockton, Supervisor; Dr. Leonard A. Baker, Middleboro; Dr. Richard B. Rand, North Abington; Dr. Arthur W. Carr, Bridgewater; Dr. Charles Hammond, Hanover.

Orator for 1932-33: Dr. Peter Ferrini, Brockton.

Librarian: Dr. John H. Weller, Bridgewater.

Commissioner of Trials: Dr. W. H. Stevenson, North Easton.

Nominating Committee: Dr. Richard B. Rand, North Abington; Dr. Thomas H. McCarthy, Brockton; Dr. E. Dwight Hill, Plymouth.

It was moved and seconded that the report of the Nominating Committee be accepted and the above-named officers were unanimously elected for the year 1932-33. Dr. Gilman Osgood, chairman of the committee on resolutions on the late Wilfred Brown of Plymouth, was then called upon to deliver the eulogy on Dr. Brown. Dr. Osgood read a most tender eulogy and showed that he had given a good deal of attention to the details of the late Dr. Brown's career. Dr. McNamara appointed a committee of three to draw up resolutions on the late Dr. I. I. Richmond of Bridgewater. This committee consisted of Dr. W. B. Bannerman, chairman, Dr. Peirce H. Leavitt and Dr. Albert F. Hunt of Bridgewater. The business of the meeting having concluded, Dr. McNamara introduced as the speaker of the evening Dr. Leon A. Alley, superintendent of the Lakeville State Sanatorium, who took for his subject "The Sanatorium Child."*

*This paper will be published at an early date in this *Journal*.

THE SOUTH END MEDICAL CLUB

The next regular meeting of the South End Medical Club will be held at the office of the Boston Tuberculosis Association, 554 Columbus Avenue, Boston, on Tuesday, May 17, 1932, at 12 noon. The speaker will be N. A. Nelson, M.D., Assistant Director, Division of Communicable Diseases, State Department of Health, Boston, and his subject, "Gonorrhea and Syphilis."

The usual luncheon will be served at 1 o'clock. All physicians are cordially invited to attend. Come and bring guests who are in the medical profession.

BERKSHIRE DISTRICT MEDICAL SOCIETY

The May meeting of the Berkshire District Medical Society will be held at the Wendell Hotel, Pittsfield, May 13.

The speaker of the evening will be Dr. Frederic Jay Cotton of Boston. The subject will be: "Fractures of the Ankle and Wrist."

HUGH DOWNEY, *Secretary*.

NEW ENGLAND HEART ASSOCIATION

CARDIAC COURSE

The seventh meeting of the Cardiac Course of the New England Heart Association for the season 1931-1932 will be held in the Boston Medical Library (John Ware Hall) on Wednesday, May 18 (not May 11), at 4:30 P.M.

Thyrocardiac Disease and Other Endocrine Cardiovascular Relationships

1. Hyperthyroid Heart Disease. Dr. Lewis M. Hurxthal.
2. Hypothyroid Heart Disease. Dr. James H. Means.

3. Endocrine Cardiovascular Relationships Exclusive of Thyroid Disease. Dr. Charles H. Lawrence.
4. Discussion. Dr. Gerald Blake.

All who are interested are invited to attend.

PAUL W. EMERSON, M.D., *Secretary.*

THE NORFOLK DISTRICT MEDICAL SOCIETY

EIGHTY-SECOND ANNUAL MEETING

Hotel Kenmore, Boston, Mass., May 10, 1932

Order of Exercises:

Business Meeting: 6:00 P.M.

1. Minutes of previous meeting.
2. Report of the Treasurer.
3. Reports of Committees.
4. Election of Officers.
5. Incidental Business.

Dinner: 7:00 P.M.

Following the dinner there will be an illustrated talk by Dr. George Burgess Magrath, Medical Examiner Suffolk County, North, who will tell us of some of his professional experiences.

Your Executive Committee hopes that the membership will respond with a large attendance. In accordance with our custom of the past few years the members are invited to have ladies accompany them. Dinner tickets for members will be $1.50 and for their guests $2.50. Please mail return postal cards so that they will reach the secretary not later than Friday, May 6, as a large attendance may well be expected and reservations must be made with the hotel management. Ample parking facilities will be found in the rear of the hotel.

Send your reservation card in now!

W. B. KEELER, M.D., *President,*

FRANK S. CRUICKSHANK, M.D., *Secretary.*

31 Robert Street, Roslindale.

Nominating Committee's List of Nominations for 1932-1933:

President: S. F. Curran, Dorchester.

Vice-President: A. S. Begg, West Roxbury.

Secretary: W. Richard Ohler, Jamaica Plain.

Treasurer: George W. Kaan, Sharon.

Commissioner of Trials: H. F. R. Watts, Dorchester.

Nominating Councillor: David G. Eldridge, Dorchester, C. S. Francis (Alternate), Brookline.

Censors: John S. H. Leard, West Roxbury; J. S. May, Roxbury; H. K. Boutwell, Brookline; E. P. Ruggles, Dorchester; Geo. W. Winchester, Milton.

Councillors: H. L. Babcock, Dedham; J. W. Bail, Brookline; F. J. Bailey, Dorchester; Henry Baker, Dorchester; F. G. Balch, Jamaica Plain; W. W. Barker, Dorchester; A. S. Begg, West Roxbury; D. N. Blakely, Brookline; W. L. Burrage, Brookline; W. S. Burrage, Brookline; F. S. Cruickshank, Roslindale; S. F. Curran, Dorchester; A. H. Davison, Milton; D. G. Eldridge, Dorchester; C. B. Faunce, Jamaica Plain; John E. Fish, Canton; C. S. Francis, Brookline; N. W. Gillespie, Dorchester; J. I. Grover, Dorchester; J. B. Hall, Roxbury; H. B. Jackson, Jamaica Plain; G. W. Kaan, Sharon; W. B. Keeler, Roxbury; W. C. Kite, Milton; J. S. H. Leard, West Roxbury; C. L. MacGray, Needham; Charles Malone, Jamaica Plain; F. P. McCarthy, Milton; S. F. McKeen, Brookline; J. R. McPeake, Milton; T. J. Murphy, Roxbury; W. Richard Ohler, Jamaica Plain; Thos. H. O'Toole, Sr., Norwood; Frederick Reis, Dorchester; S. A. Robins, Roxbury; C. A. Rowe, Milton; A. A. Shapira, Jamaica Plain; Joseph L. Sullivan, Roxbury; H. F. R. Watts, Dorchester; W. A. White, Roxbury; Geo. W. Winchester, Milton; W. A. Young, Dedham.

Respectfully submitted by the Nominating Committee,

GEORGE W. WINCHESTER, *Chairman.*

ESSEX NORTH DISTRICT MEDICAL SOCIETY

THE NINETY-FIRST ANNUAL MEETING

WEDNESDAY, MAY 11, 1932

ANDOVER ACADEMY, ANDOVER, MASS.

1:00 Business Meeting—Peabody House.

2:00 Annual Dinner, Phillips Inn.

3:00 Talking Movies:

(a) Repair 2nd and 3d degree laceration perineum and rectocele.

(b) Some features of Hospital Administration. Discussion.

4:30 Dr. Roderick Heffron outlines the Pneumonia serum treatment under auspices of the State Department of Health.

Academy telephone—Andover 720.

Peabody House is located on west side of Main Street opposite main entrance to campus. Park cars on Phillips street.

Censors meet at Hotel Bartlett, Main Street, Haverhill, at 3:30 P.M.

Thursday, May 5, 1932, for the examination of candidates.

H. H. NEVERS, *President.*

E. S. BAGNALL, *Secretary.*

281 Main Street, Groveland.

SOCIETY MEETINGS
CONGRESSES AND CONFERENCES

May 5—Mental Hygiene Conference. See page 873, issue of April 21.

May 5, 6 and 7—American Climatological and Clinical Association. See page 822, issue of April 14.

May 6—New England Pediatric Society. See notice on page 923, issue of April 28.

May 6 and 7—The American Proctologic Society. See page 767, issue of April 7.

May 9—American Medical Golfing Association. See page 917, issue of April 28.

May 9-13—American Medical Association, New Orleans, La.

May 10—American Heart Association. See notice on page 824, issue of April 14.

May 17—The South End Medical Club. See page 973.

May 18—The New England Heart Association. See page 973.

June 6, 7, 8, and 9—National Tuberculosis Association. See page 598, issue of March 17.

June 8, 9, 10—Massachusetts Medical Society, Hotel Statler, Boston.

June 21-24—Catholic Hospital Association. See page 369, issue of February 18.

July 10 - August 12—The Second Intensive European

Summer Course in Surgery, Gynecology and Obstetrics. See page 714, issue of March 31.

Autumn—International Postgraduate Courses in Berlin. See page 1169, issue of December 10.

September 19-22 — International Congress of Biliary Lithiasis. See notice on page 427, issue of February 25.

October 24-27 — American Public Health Association. See notice on page 1321, issue of December 31.

October 24-28—Inter-state Postgraduate Medical Association of North America. See page 39, issue of January 7.

DISTRICT MEDICAL SOCIETIES

Berkshire District Medical Society

May 13—See page 973.

Essex North District Medical Society

May 11—See page 974.

Essex South District Medical Society

May 5, Thursday—Censors' Meeting, Salem Hospital, 3:30 P.M.

May 10, Tuesday—Annual Meeting. The Tavern, Gloucester. Ladies invited.

Franklin District Medical Society

May 10—Meeting at the Weldon, Greenfield, at 11 A.M.

CHARLES MOLINE, Secretary.

Middlesex East District Medical Society

May 11—Meeting to be held at the Towanda Club, Woburn, at 1 P.M. The speaker will be Dr. Samuel R. Meaker, Boston.

Norfolk District Medical Society

May 5—Censors' Meeting for examination of candidates. Roxbury Masonic Temple, 171 Warren Street, Roxbury, 4 P.M. Fee $10 payable at time of examination.

May 10—See page 974.

F. S. CRUICKSHANK, Secretary.

Norfolk South District Medical Society

May 5—Annual Meeting at 12 o'clock noon, at the Norfolk County Hospital, South Braintree. Censors will meet on May 5 at 11:15 A.M. at the Norfolk County Hospital.

N. R. PILLSBURY, Secretary.

Suffolk District Medical Society

May 5—The Censors will meet for the examination of candidates at the Medical Library, No. 8 The Fenway, Thursday, May 5, 1932, at 4:00 o'clock.

LELAND S. McKITTRICK, M.D., Secretary.
205 Beacon Street, Boston.

Worcester District Medical Society

Wednesday afternoon and evening, May 11—Annual Meeting.

ERWIN C. MILLER, Secretary.

BOOK REVIEWS

Gynecological Roentgenology. Annals of Roentgenology—Vol. 13. By JULIUS JARCHO, M.S., F.A.C.S. Paul B. Hoeber, Inc., New York. 650 Pages. Price $20.00.

This book is the first volume published dealing with the whole subject of the roentgenology of the female genital organs. It is extremely well written and should be of great value to both roentgenologist and gynecologist. In addition to the valuable contributions to the subject by the author himself, the book is especially noteworthy because of the large amount of reference material which it contains. In the treatment of each subject the author reviews the literature on that subject, briefly summarizing the important work done by others in the field, describing their methods, theories, and results. The work is very complete in this regard.

The author devotes the first chapter to the anatomy of the female genital organs. He then discusses the use of general radiographic methods in gynecologic diagnosis. The use of pneumoperitoneum, both by the perabdominal and transuterine methods is described at great length, including methods, of production, indications, contraindications, dangers and diagnostic inferences. Uterosalpingography is described, including types of apparatus, technique, indications, and contraindications. He compares the diagnostic value of uterosalpingography with the diagnostic value of the Rubin test and demonstrates the greater accuracy of the former. He, himself, uses the combined method and he demonstrates its accuracy in revealing pathologic conditions in the female pelvis. Every subject mentioned is well illustrated by case histories and excellent reproductions of roentgenograms. The author particularly stresses the importance of fluoroscopy and the taking of serial films and he points out the pitfalls which await one who bases his diagnosis on only one or two roentgenograms. His chapter on the physiology of the uterus and tubes is most instructive and complete. Chapters seventeen to twenty are devoted to the roentgenologic interpretation in cases of congenital anomaly, uterine displacement pregnancy, myomata, carcinoma, ovarian cyst, ectopic pregnancy, tubal occlusion, salpingitis and pelvic inflammatory conditions. The author then concludes the book with an excellent chapter on radiation therapy as applied to gynecologic conditions.

There are few criticisms that one could offer. Possibly, from the roentgenologic standpoint, there is too much space devoted to the gynecologic aspect, especially in the treatment of pneumoperitoneum. One might also wish for a more extensive treatment of the roentgenologic interpretation of uterosalpingograms. The book, however, is a work of outstanding merit and deserves the attention of every gynecologist and roentgenologist.

History of Medicine in the United States. By FRANCIS R. PACKARD, M.D. New York: Paul B. Hoeber, Inc., 1931. 2 vols., 1348 pages. Price $12.00.

Over thirty years ago, Dr. Packard published a "History of Medicine in the United States." This book has long been out of print and the medical world has awaited with interest his new history. No one in this country is more fitted to write such a book. For many years Dr. Packard has been the editor of one of the best historical magazines in the world, the *Annals of Medical History*. In addition, he has contributed a number of books to the subject, all showing sound scholarship. His present work reveals the same kind of careful, painstaking investigation. There is hardly an error in the whole book that has caught the eye of the reviewer.

The subject is taken up from the chronological

point of view, showing the development of American medicine, first in the English colonies, then its growth along the eastern seaboard and the gradual penetration into the West and throughout the whole United States. Dr. Packard gives a great deal of material that could not be found in any other single volume and particular attention should be called to his excellent chapters on the early hospitals and medical schools, the pre-revolutionary medical publications, and the outline of the development of medical practice and education in the various states of the Union. Two chapters contributed by other physicians are of great importance. Dr. P. M. Ashburn writes on the Medical Department of the United States Army up to the Spanish-American War and Dr. R. P. Parsons contributes an equally good chapter on the history of the Medical Department of the United States Navy. All of Colonel Ashburn's material has appeared before in his well-known book on the same subject, but Dr. Parsons' contribution, so far as the reviewer knows, is unique and forms one of the most important parts of the whole book.

These two big volumes contain an excellent bibliography of the sources of medical history, as well as a good working index. They are a great credit to Dr. Packard's erudition and energy and at once become the standard authority on the subject. The general appearance of the volumes is creditable. Unfortunately, the paper on which they are printed is rather soft and easily torn. This seems regrettable in view of the fact that the two volumes will be used in all libraries constantly for reference.

Applied Physiology. By SAMSON WRIGHT, Professor of Physiology, University of London, Middlesex Hospital Medical School. Fourth Edition. Oxford University Press, 1931. Price $5.50.

In the past five years, four editions of this book have appeared. On the whole this is one of the best books for students and clinicians which has recently come to the attention of the reviewer. It summarizes clearly and briefly the newer knowledge of physiology, particularly as it has been practically applied to clinical medicine. The book is well written with plenty of references and is in general a masterly presentation of the subject for the purposes for which it is written. The last edition brings it up to date, particularly in regard to recent discoveries in the glands of internal secretion, and recent progress in metabolic diseases such as the newer knowledge regarding vitamines. Through deleting some of the older, less important work, the book has not increased in size, and remains the very readable length of five hundred pages.

For medical students, particularly in their last two years of study, and for clinicians this book stands out as one of inestimable value as an easy method of uniting the medical sciences with the clinic. Its value is perhaps not so great as a textbook of physiology because of its brevity, and because of the emphasis which is placed upon the practical significance of observations.

As a source of medical information, interestingly and briefly told, this book is recommended in the highest terms.

Modern Proctology. By MARION C. PRUITT, Atlanta, Ga. C. V. Mosby Co. 1931. Price $8.00.

This is a complete textbook of 404 pages with 233 illustrations. The author recognizes the fact that there are already in existence many good textbooks on Proctology, but feels there is a place for another to include recent advances in this field. He quotes freely from various authors, using Cunningham as his anatomical authority. Most of the instruments in common use are described, and many are pictured. Pruitt has devised a short proctoscope, 4 cm. in length, which is much like a short Kelly speculum. Methods of examination and diagnosis are presented in detail, and a chapter each is devoted to Anesthesia, Embryology and Congenital Malformations, Constipation, Megacolon, Rectal Hysteria, and Volvulus of the Pelvic Colon. The common types of rectal pathology are discussed thoroughly in the remaining chapters. Pruitt classifies abscesses and fistulae in accordance with the accepted authorities. He feels that tuberculosis plays only a small part in their production, and mentions that patients with pulmonary tuberculosis frequently have non-tuberculous fistulae. The author devotes 13 pages to a discussion of Injection Treatment of internal hemorrhoids, a method which he heartily endorses and carries out by the use of a 12½% solution of carbolic acid in glycerin and water. The number of treatments averages 4. The various operative procedures are also dealt with, including the author's modification of the excision and suture method.

Fifty-seven pages are devoted to a consideration of Tumors, especially the surgery of carcinoma, with a sketch of most of the operative procedures in past and present use. Some might question the advisability of including one or two of these in a 1931 textbook. Their use is definitely to be condemned, with the present high degree of development of the abdomino-perineal resections. Pruitt does, however, state his preference for the latter.

The book can be recommended as a good general textbook on diseases of the rectum.

Cancer—What Everyone Should Know About It. By JAMES A. TOBEY, Dr.P.H. Alfred A. Knopf. New York. 1932. Pp. 313. Price $3.00.

This volume represents a readable account of cancer together with a historic discussion and an interesting chapter on famous persons who had cancer. Another valuable chapter is that on false cancer cures.

All in all we have here a concise, yet fairly adequate account of the entire problem of cancer so far

as it concerns the public. The book is not written in the pungent and lively style to which the public interested in medical matters has been introduced by de Kruif. However, it is an accurate, authoritative and valuable contribution to its field.

United States Army X-Ray Manual. Edited by Lt. Col. H. C. Pillsbury, M. C., U. S. A. Paul B. Hoeber, Inc. New York. 482 pages. Price $5.00.

The first edition of this book appeared during the World War as the coöperative work of several men. It was designed to cover the problems of war service in Roentgenology.

In the present revised edition the various subjects have been brought up to date and rearranged to meet the conditions in times of peace.

The book is concise and practical. It contains an excellent chapter on X-ray Physics written in language which is easily understandable by the average physician. Special attention is given to protection both of the operator and patient. There is an excellent chapter on apparatus in which the various types of machines are described and the methods for handling explained. The proper care of apparatus is emphasized. There is a chapter devoted to technique in which the principles underlying radiographic technique are discussed and a working exposure table given. The most practical methods for the localization of foreign bodies are described in detail. About half the book is given over to a discussion of roentgen diagnosis in its various fields. The illustrations are good and the statements of facts, those which are generally accepted. Outside of its use in the Army the book should be of value to those physicians who are doing their own x-ray work and to the beginner in roentgenology. It might also be used as a teaching guide.

The Genius of Louis Pasteur. By Piers Compton. New York: The Macmillan Co., 1932. ix + 361 pages. Price $4.50.

This is an excellent life of Pasteur, written in an easy, pleasant style. Apparently all references to Pasteur's work have been carefully investigated and the volume has a stamp of authority. It is intended to be a popular account of one of the most brilliant scientists of all time and as such can be highly recommended.

Conquering Arthritis. By H. M. Margolis, M.D. Pittsburgh, Pennsylvania. Set up and printed, Norwood Press Linotype, Inc., Norwood, Mass., U. S. A. Cloth—pp. 192. Published November, 1931. New York, The Macmillan Company. Price $2.00.

This book is purported to be a manual for use of the arthritic patient. There is a very short history illustrating the ancient history of arthritis, an account of the general problem of rheumatic disease, emphasizing that arthritis is a general systemic disease. Emphasis is also placed in the note of hopefulness for the individual patient, and the probable chances he has to obtain functional restoration of arthritic disabilities.

There is unfortunately added a classification of arthritis. It is an interesting question, this divine acceptance of blind duty in presenting classifications of arthritis. This classification is more confusing to the patient than helpful.

Focal infection is dealt with in some detail, presenting ideas to the patient which may prove to be more disturbing than helpful.

A chapter on the Life Cycle of Infectious Arthritis presents most of the accepted ideas, which may be summed up briefly as, in that, deficient circulation in a joint is the outstanding impairment.

There are chapters on so-called Neuritis, Spondylitis, Rheumatic Fever, and considerable is written regarding the treatment of Chronic Arthritis. This is a fair summary of the popular acceptance of various ideas of treatment. The author emphasizes the deplorable use, or abuse of self-medication, which represents a direct challenge to the medical profession in so far as it is an index of the failure of the medical profession to give the patient satisfactory service and result from the point of view of the patient.

Several diets are offered, some drugs are given value—at times disproportionate to their measurable use.

Physiotherapy, Diathermy, Faradic Current, Ultra-Violet Light, and Massage are treated briefly. I think it is worthy of an expression of appreciation that massage is emphasized, because unfortunately a trained masseur, or masseuse have become members of an almost lost art.

Vaccines are treated briefly—typhoid vaccine especially.

Some of the adjuncts in the treatment of arthritis seem to be sadly overlooked in this manual. The individual treatment of arthritis is stressed, but the important aspect, namely, the humane side is neglected almost entirely. Arthritis is described as a systemic disease. Unfortunately, the joint change is the obvious outstanding sign.

Everyone mentions that the general system should be considered, but practically all fall into the same pit and direct all of their attention to the joint aspect of arthritis.

This book, I believe, may be of interest to the introspective, inquisitive, apprehensive type of patient, but actually it represents another unnecessary addition to the already cumbersome accumulation of works on arthritis.

BOOKS RECEIVED FOR REVIEW

Public Health in New York State—Report of the New York State Health Commission to His Excellency, the Honorable Franklin D. Roosevelt, Governor of the State of New York. Published by The Department of Health, State of New York. 504 Pages.

Reconstruction of the Biliary Tract by Edmund Horgan. Published by The Macmillan Company. 201 Pages. Price $4.00.

The Technique of the Non-Padded Plaster Cast by Fritz Schnek. With a preface by Lorenz Bohler. Authorized English Translation by Douglas D. Toffelmier. Published by Wilhelm Maudrich. 139 Pages.

Problems in Solutions by Elizabeth E. Sullivan. Published by M. Barrows & Co. 100 Pages. Price $1.35.

A Text-Book of X-Ray Therapeutics by Robert Knox. Completed and Edited by Walter M. Levitt. Published by The Macmillan Company. 250 Pages. Price $7.00.

Jobs for the College Graduate in Science by Edward J. v. K. Menge. Published by The Bruce Publishing Company. 175 Pages. Price $2.00.

Growth and Development of the Child. Part III—Nutrition. Report of the Committee on Growth and Development. Kenneth D. Blackfan, M.D., Chairman. White House Conference on Child Health and Protection. Published by The Century Company. 532 Pages. Price $4.00.

The Surgical Clinics of North America. April, 1932. Volume 12, Number 2. New York Number. Published by the W. B. Saunders Company. 306 Pages.

Modern General Anesthesia. By James G. Poe. Second Edition. Published by F. A. Davis Company. 231 Pages. Price $2.50.

Pathology for Nurses by Eugene C. Piette. Published by F. A. Davis Company. 251 Pages. Price $1.75.

Text-Book of Massage and Remedial Gymnastics by L. L. Despard. With two chapters contributed by Hester S. Angove. Third Edition. Published by Humphrey Milford, Oxford University Press. 474 Pages. Price $6.00.

Surgical Errors and Safeguards by Max Thorek. Published by J. B. Lippincott Company. 696 Pages. Price $10.00.

Surgical Pathology of the Female Generative Organs by Arthur E. Hertzler. Published by J. B. Lippincott Company. 346 Pages. Price $5.00.

Insanity Plea by Edward Huntington Williams. Published by The Williams & Wilkins Company. 169 Pages. Price $2.00.

International Studies on the Relation Between the Private and Official Practice of Medicine with Special Reference to the Prevention of Disease. Conducted for The Milbank Memorial Fund by Sir Arthur Newsholme. Volume 3. Published by George Allen and Unwin, Ltd., and The Williams & Wilkins Company. 558 Pages. Price $5.00.

Vomiting of Pregnancy. A symposium of the current literature. Published by the Bisodol Company. 76 Pages.

Schizophrenia by Helge Lundholm. Published by the Duke University Press. 117 Pages.

Die theoretischen Grundlagen und die praktische Verwendbarkeit der gerichtlichmedizinischen Alkoholbestimmung by Prof. Dr. E. M. P. Widmark. Published by Urban & Schwarzenberg. 140 Pages.

The Genius of Louis Pasteur by Piers Compton. Published by The Macmillan Company. 361 Pages. Price $4.50.

Fertility and Sterility in Marriage by Th. H. Van De Velde. Translated by F. W. Stella Browne. Published by Covici, Friede, Inc. 448 Pages. Price $7.50.

The Social and Ethical Significance of Nursing by Annie W. Goodrich. Published by The Macmillan Company. 401 Pages. Price $3.00.

Foods in Health and Disease by Lulu G. Graves. Published by The Macmillan Company. 390 Pages. Price $3.50.

Wheeler and Jack's Handbook of Medicine. Revised by John Henderson. 9th Edition. William Wood & Company and E. & S. Livingstone. 654 Pages. Price $4.00.

Studies from The Rockefeller Institute for Medical Research. Reprints. Volume 81. Published by The Rockefeller Institute for Medical Research. 598 Pages.

Normal Youth and Its Everyday Problems by Douglas A. Thom. With an Introduction by William A. Neilson. Published by D. Appleton and Company. 368 Pages. Price $2.50.

The Youngest of the Family by Joseph Garland. Published by the Harvard University Press. 196 Pages. Price $2.00.

Microscopic Slide Precipitation Tests for the Diagnosis and Exclusion of Syphilis by B. S. Kline. Published by The Williams & Wilkins Company. 99 Pages. Price $2.50.

Primary Carcinoma of the Lung—Bronchiogenic Cancer—A Clinical and Pathological Study in Two Parts by B. M. Fried. Published by The Williams & Wilkins Company. 247 Pages. Price $5.00.

Obstetric Education. Report of the Subcommittee on Obstetric Teaching and Education, Fred Lyman Adair, Chairman. White House Conference on Child Health and Protection. Published by The Century Co. 302 Pages. Price $3.00.

Nutrition Service in the Field. Report of the Subcommittee on Nutrition, Lucy H. Gillett, Chairman. White House Conference on Child Health and Protection. 139 Pages. *Child Health Centers: A* Survey. Report of the Subcommittee on Health Centers, J. H. Mason Knox, Jr., Chairman, Lillian Laser Strauss, Vice-Chairman. White House Conference on Child Health and Protection. 57 Pages. Published by The Century Co. Price $2.00.

Psychopathology of Forced Movements and the Oculogyric Crises of Lethargic Encephalitis by Smith Ely Jelliffe. Published by The Nervous and Mental Disease Publishing Co. 219 Pages.

A New Theory of Cancer and Its Treatment by C. F. Marshall. Published by John Wright & Sons, Ltd. 53 Pages. Price 3/6 net.

The House That Freud Built by Joseph Jastrow. Published by Greenberg Publisher. 293 Pages. Price $2.50.